

NOVEMBER 1953 "New Look" for "North Coast Limited"... p. 14

RAILWAY AGE

NEWS
ISSUE

The Standard Railroad WEEKLY for Almost a Century

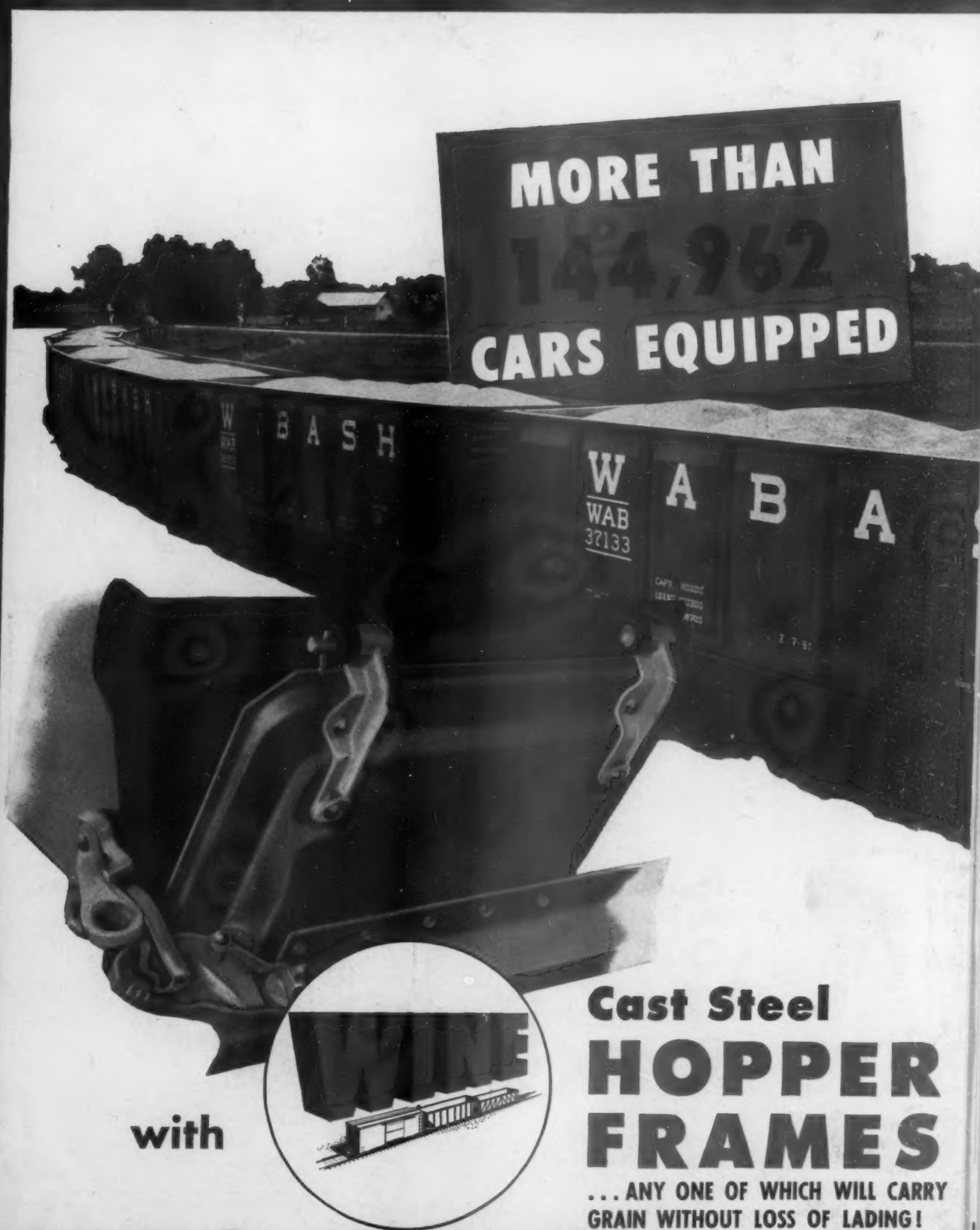



Illustration of a hopper car with a sign reading "MORE THAN 144,962 CARS EQUIPPED". The car is labeled "WABASH" and "WAB 37133".

**Cast Steel
HOPPER
FRAMES**

... ANY ONE OF WHICH WILL CARRY
GRAIN WITHOUT LOSS OF LADING!

with 

THE WINE RAILWAY APPLIANCE CO. TOLEDO 9, OHIO

IN THIS ISSUE

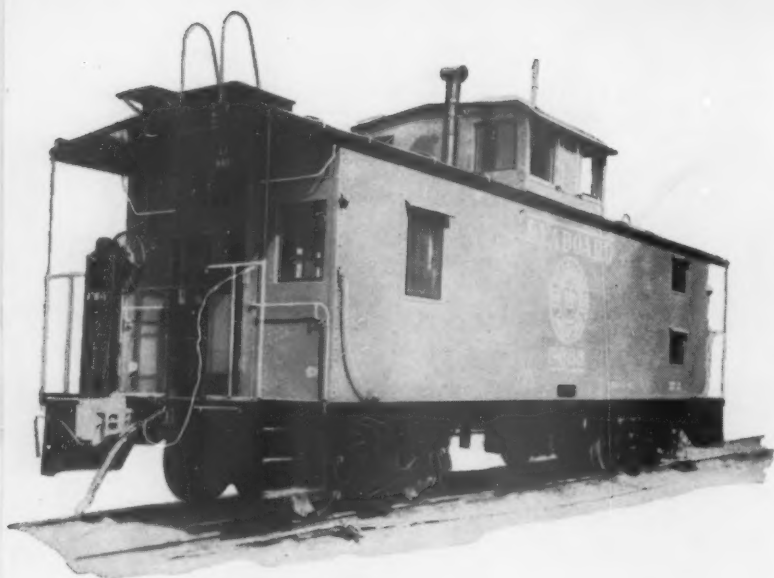
C&NW "Box Car
No. 1"

New Right-of-Way
For CSS&SB

GM Announces
10 New Models

Should Car Service
Rule 3 Be Revised?

What's the Law on
Competitive Rates?

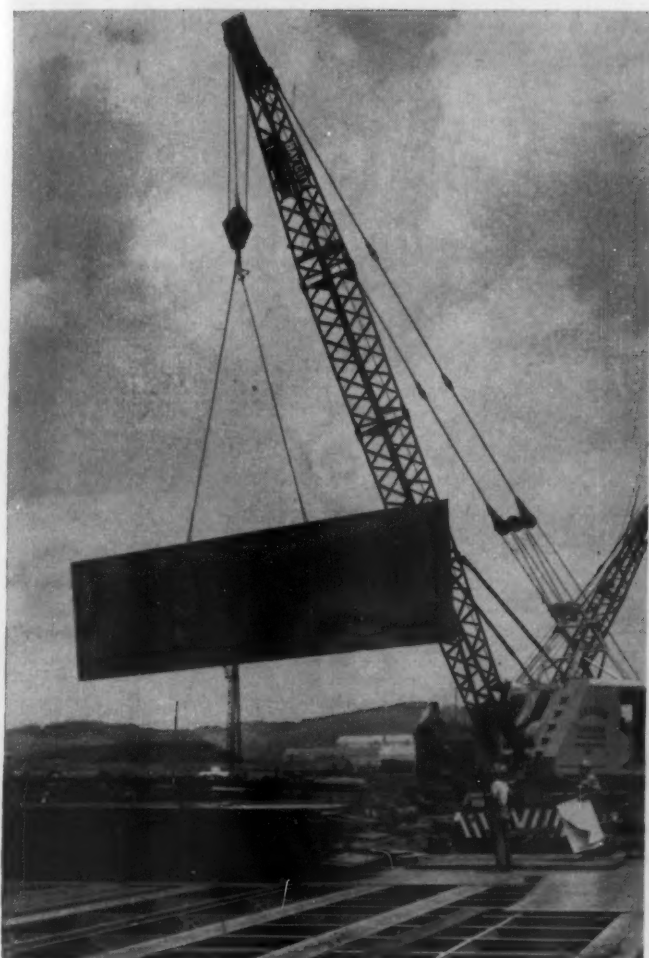


Safe, dependable, easy-riding caboose trucks make for better working conditions in today's high-speed freight service . . . These railroads, as are many others, insure caboose truck dependability by specifying the ultra-modern Unit type hangerless brake rigging for their newest caboose cars.



UNIT TRUCK





Deck plate of Mayari R being swung into position, where it will be plug-and-fillet-welded to the supporting girders. Bridge was fabricated and erected by Bethlehem Steel Co.



Rails are held in place by rail-clamps bolted to stud welds. Next step: a 6-in. layer of mastic covering the bridge deck. Those switch stands are Bethlehem New Centuries.

New 4-Track Bridge Decked with Mayari R

This 510-ft deck-plate-girder bridge gives the Philadelphia, Bethlehem and New England Railroad a four-track connection between its newly constructed interchange and classification yard, and previously existing trackage. The bridge, which was opened for service in August, 1953, spans a highway and a stream, near Hellertown, Pa.

One of its unusual features is a 6-in. layer of mastic, completely covering the decking. To forestall possible corrosion, the designers specified Mayari R for the deck plates. Tests have shown that Mayari R has from five to six times the atmospheric corrosion resistance of plain carbon steel. It's much stronger, too, with a yield point 50 pct greater than that of structural-grade carbon steel.

Railroads find many uses for Mayari R low-alloy,

high-tensile steel. In box cars and gondolas, and in locomotives, as well as in bridges and other structures, Mayari R resists corrosion and adds strength without increasing weight.

Our Booklet 259 will show you many examples of ways in which strong, weight-saving, long-lasting Mayari R improves railway rolling stock and structures. Just phone or write to the nearest Bethlehem sales office, and a copy will be mailed to you promptly.

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

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Mayari R *makes it lighter...stronger...longer lasting*



Single Track with
"UNION" C.T.C.
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 for rail renewal
 program

They removed a main track . . .
 and its costs went with it!



CENTRALIZED TRAFFIC CONTROL provides maximum utilization of track, cars, and locomotives. Train movements are directed by wayside signals. All controlled from one location. C.T.C. can pay its way for you, too. Your inquiry will be most welcome. We'd like to help you cut operating expenses with C.T.C.

*Here's what happened!**

1. 67 miles of double track equipped with automatic block changed to single track with C.T.C.
2. Rail on double track in most of the territory was due for renewal in 1950.
3. Renewal of rail on *one track instead of two* for a distance of 62 miles . . . and the installation of C.T.C. . . . saved \$1,500,000.00.

* Factual data will be supplied upon request.

UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

SWISSVALE



PENNSYLVANIA

RAILWAY AGE

PUBLISHED WEEKLY BY THE SIMMONS-BOARDMAN PUBLISHING CORPORATION AT ORANGE, CONN., AND ENTERED AS SECOND CLASS MATTER AT ORANGE, CONN. UNDER THE ACT OF MARCH 3, 1879. NAME REGISTERED IN U. S. PATENT OFFICE AND TRADE MARK OFFICE IN CANADA. EDITORIAL AND EXECUTIVE OFFICES AT 30 CHURCH STREET, NEW YORK 7, N. Y., AND 79 WEST MONROE STREET, CHICAGO 3, ILL. BRANCH OFFICES: 1081 NATIONAL PRESS BUILDING, WASHINGTON 4, D. C.—TERMINAL TOWER, CLEVELAND 13, OHIO—TERMINAL SALES BUILDING, PORTLAND 3, ORE.—1127 WILSHIRE BOULEVARD, LOS ANGELES 17, CAL.—244 CALIFORNIA STREET, SAN FRANCISCO 11, CAL.—2909 MAPLE AVENUE, DALLAS 4, TEX.

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Nov. 9, 1953 NEWS ISSUE Vol. 135, No. 19

Week at a Glance

Dr. J. H. Parmelee, railroad statistician and economist, has retired as a vice-president of the A.A.R. and director of its Bureau of Railway Economics. His successor in both positions is **J. Elmer Monroe** 9

Negotiations with the "non-ops" over their "fringe benefit" demands have apparently reached at least a temporary breaking point. 10

FORUM: Apparently contradictory I.C.C. decisions raise the question—What's the Law on Competitive Rates? 35

Railroad earnings were sharply lower in September than they were in the same month a year ago. Nine months' totals were still well ahead of last year's, but a few more months like September could change the cumulative picture with startling suddenness. 38

BRIEFS

Less than four weeks remain to enter *Railway Age's* \$100 essay contest! No matter what department you're in . . . if you can contribute to the greater efficiency and modernization of railroad accounting, there's still time to enter the *Railway Age* essay contest. Closing time: midnight, November 26. You'll find full details in the September 28 issue of *Railway Age*, or write **C. B. Tavenner**, managing editor, 30 Church street, New York 7, N. Y.


The Order of Railway Conductors has terminated its union shop agreement with the Chicago, Burlington & Quincy. When *Railway Age* asked O.R.C. Chief Roy B. Hughes for a statement explaining the unusual move, Mr. Hughes said: "That is something I am not very familiar with." When the reporter suggested that perhaps someone else in his organization might be more



Engineer's Rear View Mirror

The Type "B" Brake Pipe Flow Indicator is much like a rear view mirror—it reflects what is going on in the brake pipe of his train—ofttimes a mile and a half away.

Westinghouse Air Brake
COMPANY

AIR BRAKE DIVISION  WILMERDING, PA.

Current Statistics

Operating revenues, nine months	
1953	\$ 8,082,250,257
1952	7,753,276,654
Operating expenses, nine months	
1953	\$ 6,087,046,185
1952	5,973,064,639
Taxes, nine months	
1953	\$ 972,804,921
1952	909,278,663
Net railway operating income, nine months	
1953	\$ 845,430,758
1952	735,326,363
Net income, estimated, nine months	
1953	\$ 651,000,000
1952	532,000,000
Average price railroad stocks	
November 2, 1953	59.72
November 3, 1952	62.49
Carloadings revenue freight	
Forty-three weeks, 1953	32,311,615
Forty-three weeks, 1952	31,311,794
Average daily freight car surplus	
Wk. ended October 31, 1953	7,595
Wk. ended November 1, 1952	11,083
Average daily freight car shortage	
Wk. ended October 31, 1953	2,971
Wk. ended November 1, 1952	11,204
Freight cars delivered	
September, 1953	5,706
September, 1952	3,762
Freight cars on order	
October 1, 1953	42,198
October 1, 1952	95,377
Freight cars held for repairs	
October 1, 1953	99,046
October 1, 1952	104,283
Average number of railroad employees	
Mid-September 1953	1,224,719
Mid-September 1952	1,237,758

RAILWAY AGE IS A MEMBER OF ASSOCIATED BUSINESS PUBLICATIONS (A.B.P.) AND AUDIT BUREAU OF CIRCULATION (A. B. C.) AND IS INDEXED BY THE INDUSTRIAL ARTS INDEX AND BY THE ENGINEERING INDEX SERVICE. RAILWAY AGE INCORPORATES THE RAILWAY REVIEW, THE RAILROAD GAZETTE, AND THE RAILWAY AGE GAZETTE.

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Week at a Glance CONTINUED

familiar with the case, Mr. Hughes declined to name another spokesman.

The October 1 parcel post rate boost will remain in effect. A district court judge in Washington, D. C., has dismissed the case in which opponents of the increase were seeking a preliminary injunction.

Now that steel is easier to get, will railroad freight tonnage benefit or suffer? Some say easier supply will cut ton-miles because, during the shortage, steel users roved the country for material and didn't quibble about freight charges; now they'll buy closer to home. The shorter the haul the less traffic all around and the greater the proportion that goes by truck. The other school says that, as customers shift to nearer markets, the producers are striving to hold those more distant, even by reviving the practice of freight absorption that went out with basing points. That could be good for railroads.

A bouquet for its advertising program comes to the Santa Fe by way of a special article in a recent issue of the weekly Printers Ink. Author Hal Stebbins praises the road for "avoiding the ponderous and cultivating the simple" and for getting over its point about "paying its own way" without dullness.

ADVERTISERS IN THIS ISSUE

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The truck that gave the **HIGHBALL** to modern freight movement!

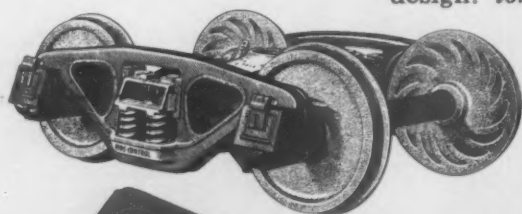
A revolution in freight handling started in 1944. Practically overnight, freight cars were built that rode safely and smoothly, at practically any speed, empty or fully loaded. *Cars that gave greater protection to lading and carried it to destination faster.*

More users buy more ASF Ride-Control trucks than all other trucks combined!

It seems hard to believe now that all these advantages were gained so quickly by just one new concept of railroad truck design: *long spring travel with constant*

friction control. And yet that concept—developed by ASF and introduced in the ASF Ride-Control Truck—gave the “Highball” to *modern* freight movement!

The strongest testimonials to the performance of ASF Ride-Control Trucks come from the railroads themselves. Today, over 300,000 car sets of these trucks have been ordered—and *re-ordered*—by 174 railroads and car owners. More are specified than all other trucks combined!




For high speeds, smooth riding, low maintenance . . .
Specify ASF Ride-Control Trucks when you order new cars.
Let a qualified ASF Representative show you how this modern truck can reduce your costs per car mile. Write us today.

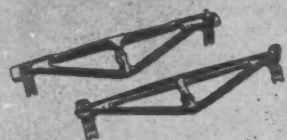


American Steel Foundries

410 North Michigan Ave., Chicago 11, Ill.

Canadian Sales: International Equipment Co., Ltd., Montreal, Quebec

Look for this **MINT**  **MARK** on the running gear you specify



Cast Steel
Brake Beams



Ride-Control
Trucks



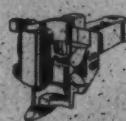
Ride-Control
Packages



Simplex
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Tightlock
Couplers



Type F
Couplers



Type E
Couplers



Dr. Julius H. Parmelee



J. Elmer Monroe



Graham E. Getty

Dr. Parmelee Retires from A. A. R.

J. Elmer Monroe succeeds him as vice-president of association and director of its Bureau of Railway Economics; Getty becomes assistant vice-president

Dr. Julius H. Parmelee has retired as vice-president of the Association of American Railroads and director of its Bureau of Railway Economics, and has been succeeded by J. Elmer Monroe.

Mr. Monroe has been assistant vice-president of the association and assistant director of the bureau, positions to which Graham E. Getty has been promoted. Mr. Getty has been statistician of the bureau.

The changes became effective November 1. The announcement, by A.A.R. President W. T. Faricy, said Dr. Parmelee would be retained by the association as consulting economist.

Outstanding Service—Dr. Parmelee's retirement, as the announcement put it, came "after more than 40 years of outstanding service in the field of transportation economics." He joined the staff of the B.R.E. in 1911 and became its director in 1920.

He became widely known as an authority on operating statistics, financial reports and other economic phases of carrier operations, including both the railroads and other forms of transportation. He has appeared as a representative of the railroads in many hearings before the Interstate Commerce Commission, state regulatory commissions, Congressional committees and other public bodies.

Dr. Parmelee was born in Trebizond, Turkey (of American parents), October 10, 1883. Following graduation from Yale University in 1904, he was

an assistant instructor there until 1907. He then served as a special examiner for the I.C.C., meanwhile completing work on his doctor's degree in economics. He received his Ph. D. from Yale in 1910, and then served as special agent on the staff of the U. S. Census Bureau.

When he joined B.R.E. in 1911, he became its statistician. As noted above, his promotion to the bureau directorship came in 1920; and in 1947 he was elected to the A.A.R. vice-presidency which he also held at the time of his

retirement. Dr. Parmelee's writings include periodical articles on transportation economics and a book, "The Modern Railway," which was published in 1940.

Bureau Career Men — Messrs. Monroe and Getty are career men with the bureau. The new director's service extends back to 1913, while Mr. Getty's goes back to 1925.

Mr. Monroe was born in Washington, D.C., September 23, 1894, and was educated at George Washington University in that city. His service with the bureau has been continuous since 1913, except for the 1917-1919 period, when he was with World War I's American Expeditionary Force. There Mr. Monroe attained the rank of captain.

He was the bureau's statistician from 1919 until 1941, when he was appointed assistant director. His election to the

C&NW EXPANDS PIGGY-BACK TO OMAHA AND TWIN CITIES

Based on the success of its initial test of truck-trailer-on-flat-car-operation between Chicago and Green Bay, Wis. (*Railway Age*, August 24, page 14), the Chicago & North Western is expanding the service from Chicago to Omaha on one hand and Minneapolis and St. Paul on the other. The new services are expected to result in a marked reduction in overall transit time for less-carload shipments. They begin November 10.

Both will be basically similar to the Green Bay operation. The flat cars, modified and equipped in C&NW shops, each handle two C&NW highway trailers. To begin the new services, the C&NW is using four flat cars and eight trailers. A spokesman

indicated that added equipment will be put in service if traffic conditions warrant. He emphasized that, like the Green Bay service, the new operation is both a test and a means to explore some of the problems that would arise should "piggy-back" become big-volume business. Freighthouse design, methods of sorting and loading, and employee training, are factors which are getting close study as the service expands.

President Paul E. Frucht has indicated that the North Western would consider acquiring additional flat cars and truck trailers for even further expansion of "piggy-back." He stated that success of Green Bay service warrants expansion to other points.

assistant vice-presidency of the A.A.R. came in 1948. From time to time in recent years, Mr. Monroe has been consultant to carrier conference committees in national wage cases. He is author of "Railroad Men and Wages."

Mr. Getty was born in Silver Spring,

Md., August 22, 1899. He was graduated from the University of Michigan with a B.A. degree in 1925, and has been on the bureau's staff since that time. He became assistant statistician in 1936, and in 1941 was promoted to statistician.

Labor & Wages

"Non-Op" Negotiations Hit Snag

Health, welfare and free transportation demands not negotiable, say carrier spokesmen—Suit filed to uphold decision as union representatives refuse to withdraw demands

Negotiations between Carriers' Conference Committees representing Eastern, Western and Southeastern railroads, and the 15 non-operating unions, appeared to have hit a breaking point in Chicago on November 4.

The carriers refused to negotiate with the non-ops on three of their basic demands—health and welfare benefits and free transportation. The carriers, to uphold their refusal, filed suit in United States District Court, and the union representatives rejected the railroads' offer to negotiate the other pending demands.

Carrier spokesmen said the suit was brought because the railroads did not want to take an arbitrary position in refusing to negotiate the unions' welfare demands. They said they would like to have a fair determination by an impartial court of the scope of collective bargaining demands that are permissible under the Railway Labor Act. Such a ruling would be in the interest of the shipping and traveling public, they stated.

Stand—The railroads' complaint sets forth that the Railway Labor Act specifically defines the purposes of the

act "to provide for the prompt and orderly settlement of all disputes concerning rates of pay, rules and working conditions." The unions' demands for unrestricted free transportation, and health and welfare benefits, under this definition, do not come within the category of subjects for collective bargaining and the carriers say they accordingly have declined to negotiate on them.

Full details of the demands of the non-operating brotherhoods—as well as those sought by the operating brotherhoods—appeared in the October 26 *Railway Age*, page 12.

Statement—In an earlier statement addressed to the employees' National Conference Committee—the non-ops' negotiating group—the carriers set forth in some detail their position with respect to the controversial demands. Specifically referring to the health and welfare demands, the carriers said:

"The demand is made, for example, that when the husband or wife of a railroad employee is sick or injured from any cause—including any sickness or injury in connection with his or her own personal employment on some non-railroad job—the railroads should pay all of the hospital, medical and surgical care. Similarly, the railroads are called upon in these demands to agree to pay premiums on life insurance of their employees, for the benefit of any person, charity or organization designated by the employee—all at the cost of the railroads.

"For many years your organizations have sought and obtained specific action from Congress in this field. Thus the Railroad Retirement Act provides annuities to employees, payments on their death to dependents and protection from varying degrees of disability. And the Railroad Unemployment Insurance Act provides unemployment relief, sick pay and maternity benefits. The last increase in such benefits was obtained by you from Congress as recently as 1952. Your action in these respects constitutes a clear recognition that the scope of the bargaining for agreements contemplated by the Railway Labor Act does not include such subject matter."

Passes—The carriers' statement also pointed out that: "The granting of free passes to any employees or their dependents is a matter of gratuities. It is not a matter of employees' 'rights,' and such passes, when granted, are not part of the rates of pay, rules or working conditions."

The demand for free transportation, the statement pointed out, is for an agreement by the employer on a subject over which he has no control.

"Representatives of employees of the Santa Fe, for example, demand that the Santa Fe enter into an agreement with them that the New York Central will give free passes on New York Central passenger trains to Santa Fe employees, their wives and dependents. It is obvious, however, that any such gratuities from the NYC do not involve rates of pay, rules or working conditions on the Santa Fe. It is equally obvious that the Santa Fe cannot possibly guarantee or contract with its employees as to what the NYC will do in giving gratuities. No railroad (Continued on page 23)



BOND BUYING WAS BOOSTED when officers and employees of the Washington, D.C., Terminal Company recently staged a two-week drive on behalf of the Treasury Department's Payroll Savings Plan. As a result, almost 60 per cent of personnel now are payroll savers, and the Terminal Company has the best record of any business in the nation's capital. A

"Bond Express" was pressed into service during the campaign, with these crew members (reading clockwise): F. Joseph Bresnahan, company auditor; Mildred Schneider; Jean Alban; Ruth Knaggs; Sidney Kerl, who is manager of the company; Mary Weeks; Caroline Myers; Adele Crist; Louise Vincent; Eunice Meley, and Margaret Smith.

THE NORTH WESTERN SHOWS BOX CAR No. 1



REPRESENTATIVES OF 31 RAILROADS came to inspect this box car in the Chicago & North Western passenger terminal at Chicago on October 22. In addition to its low number, the Pullman-Standard PS-1 car has . . .



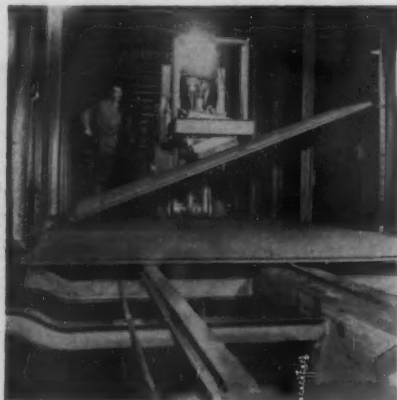
NAILABLE STEEL FLOORING, which North Western President Paul E. Feucht (left) tested for himself with aid from Harry D. Fenske, vice-president of the Great Lakes Steel Company, the flooring manufacturer. The car also has . . .



GLASS FIBER INSULATION in the end walls to curb insect infestation between the wood interior lining and the car end. Insulation blankets, made by Owens-Corning Fiberglas Corporation, were supplied by Gustin-Bacon Manufacturing Company.



LADING STRAP ANCHORS—72 of them, are placed at convenient locations from ceiling to near-floor levels. A product of the Illinois Railway Supply Company, they are welded to the car's side posts by this hand-operated welding gun.



TWO "I" BEAM FLOOR STRINGERS replace four to six "Z" bar stringers normally needed to support a wood floor. The nailable steel flooring (a section of which the lift truck is about to put in place) provided the additional structural strength.

At the rate of 18 cars each day, the Pullman-Standard Car Manufacturing Company is currently delivering an order of 625 50-ton box cars to the Chicago & North Western. Some unusual features of the cars were shown to railroad officers (and later to the general public) when the C&NW placed the first of the series on display in the road's Chicago passenger terminal on October 22.

Because the C&NW's rip tracks are set up to handle riveted car side repairs more quickly than those involving welded car sides, the road specified that the new cars be equipped with car sides of riveted construction, which are riveted to the side sills and roof structure. A C&NW spokesman told *Railway Age* that their experience had led to the conclusion that riveted car sides are cheaper to maintain and that they present a neater appearance (straighter sheets) than do welded side structures.

Another innovation in the flooring is the use of a welded steel strip running the full length of each side, to control vermin infestation and to prevent loss of lading. The strip—the Nailable Steel Floor metal grain strip—is welded to the flooring and to the side sill to replace wood closers which have a tendency to deteriorate with consequent loss of certain types of bulk commodities through leakage. The strip provides an easily cleaned, permanently tight closure which also protects against moisture.

A new, light colored topping has been employed over the two basic floor coatings. This material provides frictional resistance to shifting of lading en route and added safety for personnel during loading and unloading. This topping can be easily renewed without special equipment. The subcoatings—which provide (1) a sealer in the nailing crevices between the high-tensile steel floor channels and (2) a cover for the steel floor surfaces—are applied when the car is built and under normal conditions are expected to last the lifetime of the car. As nails are pulled with a clawbar after lading has been removed, the crevice sealer gradually fills the nail hole. The flooring of the C&NW box car is designed for use with lading to be secured with 16 or 20-penny nails.



CSS&SB to Move from Busy Street



... to High-Speed Right-of-Way

Proposed relocation at East Chicago is expected to speed service, reduce maintenance costs and add to revenues

A projected relocation of the Chicago South Shore & South Bend at East Chicago, Ind., which will involve the construction of 4.3 miles of double-track line at a cost of approximately \$1,544,000, will produce major benefits for the railroad in three important respects. It will:

(1) Materially improve both freight and passenger service by elimination of delays now experienced because of the location of the existing line along a heavily traveled city street where it is crossed at grade by 10 tracks of other railroads;

(2) Produce economies in track-maintenance costs by avoiding the expense of operating in a paved city street and of maintaining the many railroad track crossings; and

(3) Open up the possibility of adding substantially to the company's freight revenues through the development of an industrial district along the proposed new line.

The South Shore is an electrified line around the lower end of Lake Michigan which links Chicago with Hammond, East Chicago, Gary, Michigan City, South Bend, and other points in northwestern Indiana. It carries a heavy passenger business between the latter points and downtown Chicago and also handles a substantial amount of freight business.

For years the railroad's management has been concerned with the increasing difficulties in train operation through East Chicago. When the double-track line was built in 1908, it was located for about two miles

in Chicago avenue, the city's main east-and-west street. At that time the business and industrial establishments along the street were widely scattered and the amount of vehicular traffic was relatively small, so that there was no serious interference with the operation of South Shore trains.

Traffic Congestion Increases

In 1936, however, Chicago avenue was repaved and taken into the state highway system. Thereupon, business establishments along the street began to develop rapidly until at the present time it is almost solidly built up. At the same time a rapid increase occurred in the volume of highway traffic moving on the street. This traffic, including both highway vehicles and railroad cars, is now equivalent to a vehicle or car every 4.4 seconds.

Traffic on that part of Chicago avenue occupied by the railroad's tracks is governed by six stop-and-go lights which must be observed by trains as well as by other traffic. The result is serious interference with the operation of both freight and passenger trains. Further interference is caused by train movements on the 10 intersecting tracks of other railroads, three of which comprise the heavily traveled north-and-south main line of the Indiana Harbor Belt.

To overcome these drawbacks to efficient operation the railroad has acquired, or has arranged to acquire, the right-of-way necessary to move its tracks from the city street (see accompanying map). By means of two overpasses on the relocated line all grade crossings with railroads will be eliminated. The railroad is now

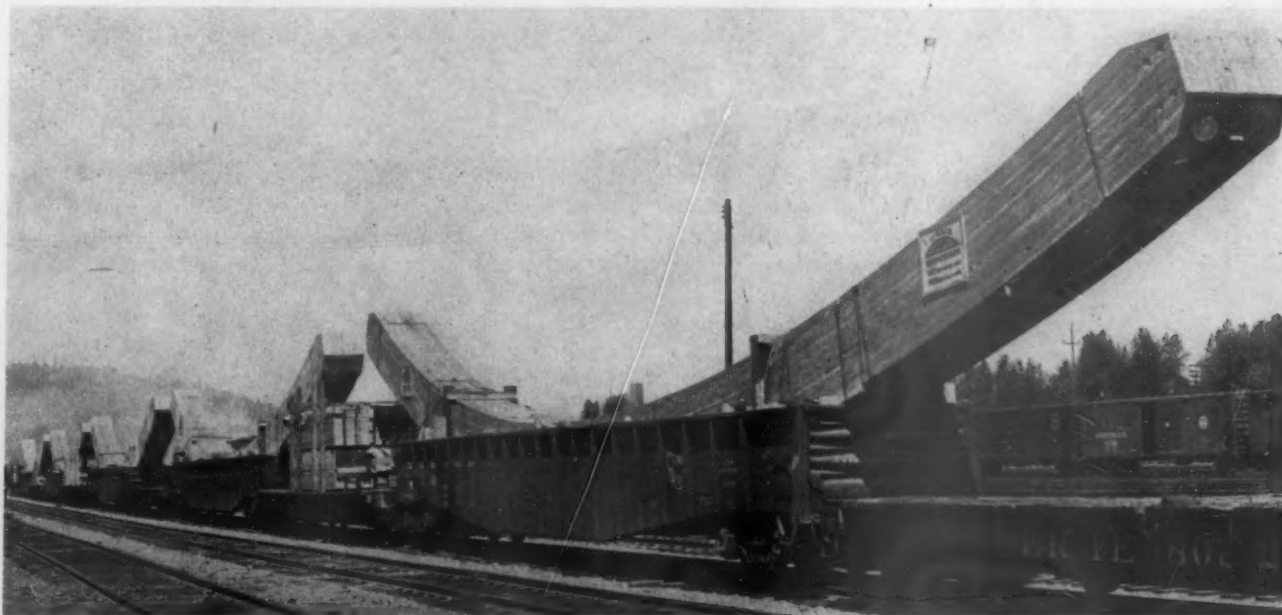
engaged in securing permits from the various municipalities to construct the relocated line across intersecting streets. Actual construction work on the project will start as soon as the necessary permits have been obtained.

Work Has National Defense Angle

Because East Chicago is in the very heart of the industrial section of northwestern Indiana, and because practically all of the heavy industries in this area are doing national defense work, a great deal of the business moving on the South Shore and on other railroads in this territory is in direct connection with the defense effort. Therefore, delays to this traffic occasioned by the bottleneck in Chicago avenue have the effect of interfering with defense activities.

Authority has been granted the road to amortize, for federal income tax purposes, during a period of 60 months, 40 per cent of the estimated cost of relocating the tracks. The management plans to meet the cost without debt financing during the construction period of about two years.

A large portion of the new route will extend through sparsely developed potential heavy industrial areas in which the railroad has acquired from numerous owners about 270 acres of land. This acreage is being put together to form what will be known as the "South Shore Industrial District." A consulting engineering firm has been engaged to make plans for its development, and an engineering party is now cross-sectioning the area. A number of industries have already indicated an interest in building warehouses or manufacturing plants in the new industrial district.



VALUE OF SHIPPER-CARRIER COOPERATION was demonstrated in careful advance checking of clearance limitations for shipment of what are said to be the largest timber arches ever manufactured. Produced by Timber Structures, Inc., of Portland, Ore., for a new athletic fieldhouse at the University of Montana, in Missoula, they were shipped via Union Pacific to Marengo, Wash., and thence via Milwaukee to destination. Ten glued and

laminated arches were made in two sections, each 114 feet from tip to tip, weighing about seven tons, and containing 10,745 board feet of lumber. Tops of the loaded arches were 17 feet, 7 inches, above rails, leaving only three-inch overhead clearance at some points on the route. Overhang at each end of each loaded gondola car was 28 feet. Loading the arches alone required a week's work by a crew of 12 men and two cranes.



SOMETHING NEW.—These Northern Pacific passengers are listening to high fidelity music as they dine . . .



amid decor inspired by color and spirit of the Northwest. They're aboard the first cars of the . . .

Restyled "North Coast Limited"

New and distinctively decorated cars will give completely new look to Northern Pacific's premier Chicago-Seattle train

As fast as the Pullman-Standard Car Manufacturing Company can turn them out, the completely redesigned cars of the Northern Pacific's "North Coast Limited" are going back into service on that Chicago-Seattle streamliner. They have been restyled under the direction of Raymond Loewy Associates as a part of the NP's current \$7.5-million passenger train improvement program. The program also includes the purchase of 20 all-stainless steel vista-dome coaches and sleeping cars from the Budd Company and 8 passenger cars of various types from Pullman-Standard. The dome equipment will all be placed in the consist of the "North Coast" when delivered next summer. A faster schedule (46½ hours) was put in effect for the train in November 1952 at which time the NP placed in service a second daily transcontinental train called "The Mainstreeter."

High Fidelity Sound System

An unusual feature of the redesigned dining cars is the installation of a high fidelity sound system which will later be extended to all other cars of the train. "Hi-Fi" differs from ordinary sound systems in that it reproduces music and voice with greater faithfulness to the original sound. Writers on the subject of sound reproduction have groped for ways to describe this difference and have generally wound up with words like "crispness" and "presence," which still convey little meaning to anyone not having experienced the almost startling clarity of a "Hi-Fi" system.

The equipment for the NP diners will permit playing both recorded music and radio programs as they are available to the radio reception equipment. It will also

permit use of the system for announcements by train personnel. The R. W. Neill Company, Chicago, designed and is installing this new equipment.

Dining Car Decoration

Copper predominates as the color pattern of the restyled diners. The Loewy organization picked its theme of decor from colors and patterns indigenous to the Northwest. Deeply grained bleached oak has been rubbed in copper so that it appears to be veined in that metal. This wood is used in cabinets and on four bulkheads which bear carved wood plaques representing the four major industries of the Northwestern states—lumber, agriculture, mining and oil. (The mining plaque is illustrated.)

The diner seats 40 passengers and is divided into two sections to avoid the appearance of being long and narrow. The device for securing the division is a pair of low cabinet units that support four vertical screens which are framed in light oak. Light metal chairs on one side of this divider are upholstered in gold, while those on the other side are done in slate blue. The caning of the dividers is repeated in a reed wrapping across the top of the chairs.

Sidewalls have a dull luster finish that gives the illusion of burnished copper and which reflects the copper tones of the bulkhead plaques and the copper-hued carpeting. The windows are draped in a specially designed fabric of semigeometric slate blue and copper motifs. Overhead lighting is recessed and is directed on each table by round fixtures in one area and rectangular fixtures in another to vary the ceiling treatment.



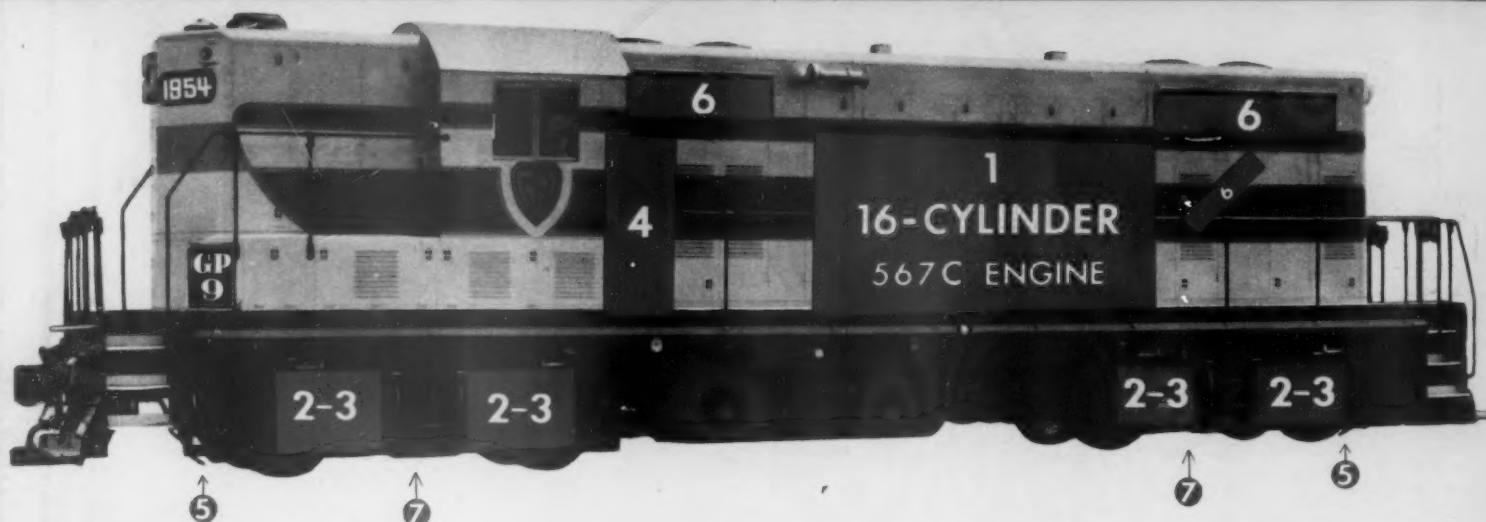
THE **CREAT**
NEW LINE OF

GENERAL MOTORS

DIESEL

LOCOMOTIVES

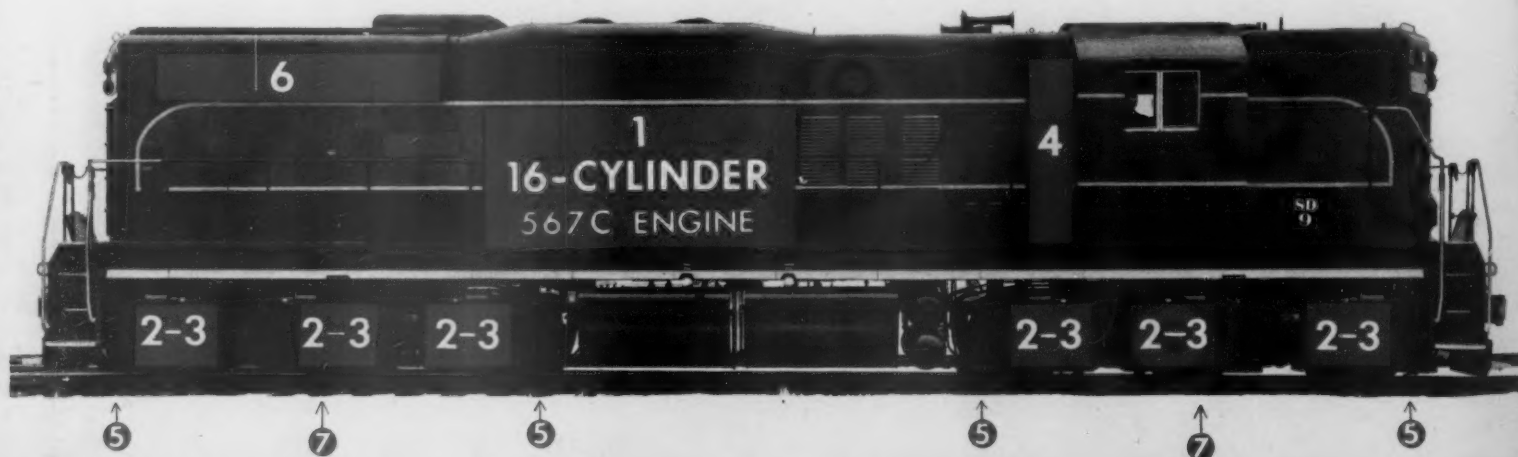
GREATER WA



**GP
9**

GP9—1750 H.P. General Purpose Locomotive. Successor to the versatile and highly popular GP7, this great new General Purpose locomotive features new higher-powered 567C engine with increased cooling capacity for both water and oil, and new higher-capacity traction motors to haul more tons, or haul trains faster. The GP9 has new six-year maintenance-free control apparatus. Included are 4-step, 3-relay transition which provides smoother transition, as well as generator overload protection, and permits utilization of the increased horse-

power over the entire speed range; a revised starting control for better switching service. It is able to kick cars faster, and more effectively perform a wide range of yard and switching work. It has new wheel-slip control, with automatic sanding in power. The GP9 has the new gear case with stable lubricant, sealed between wheel changes; new brake rigging stabilizer; new car-body filtration and ventilation, providing lower engine-room temperature, and traction motors re-grouped for better adhesion.



UP TO

17% More Horsepower

READY IN JANUARY, 1954

PRODUCT development at Electro-Motive is a continuous process. New improvements are constantly incorporated in the regular locomotive manufacture as a matter of course with constant increase in quality. But now, the changes in strategic components throughout the entire line of General Motors locomotives, applicable at one time, add up to such major improvements in the capabilities of the locomotives that they necessitate the designation of a whole new series of models.

The improvements bring new and higher standards of performance with longer life and substantial reductions in maintenance.

Standout features of these new locomotives include:

1. **New 567C Engine**—up to 17% more horsepower available for propulsion—new crankcase design extends life and reduces maintenance.
2. **New D-37 Traction Motor**—increased tractive effort—longer life insulation—less maintenance—elimination of short-time ratings.
3. **New Sealed Gear Case**—reduces maintenance.
4. **New Electrical Controls**—sealed interlocks and contactors, maintenance-free between six-year overhaul periods.

5. **New Wheel-Slip Control** and automatic sanding—to effectively utilize the increased horsepower and tractive effort in road locomotives.

6. **New Cooling Capacity** in units where higher horsepower is utilized.

7. **New Brake Rigging Stabilizer.**

Culmination of years of engineering development, these basic advancements have been proved through millions of miles of testing in cooperation with American railroads. Together, they add up to better quality and greater value in every General Motors locomotive.

The new F9, GP9 and SD9 models—with ratings of 1750 horsepower and higher tractive effort—will haul more tons as fast, or the same tonnage faster, than their famous predecessors.

The new E9—with its rating of 2400 horsepower and new traction motors—will not only maintain faster high-speed passenger schedules, but also haul more cars over ruling grades and further reduce the need for helpers.

The switching locomotives—with the new higher-powered SW900 coming between the 800- and 1200-horsepower units—more efficiently meet all yard, terminal and transfer requirements.

Moreover, the improvements contributing to longer life and reduced maintenance of all the new locomotives are designed, wherever possible, to be applicable to existing equipment as well.

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GENERAL MOTORS

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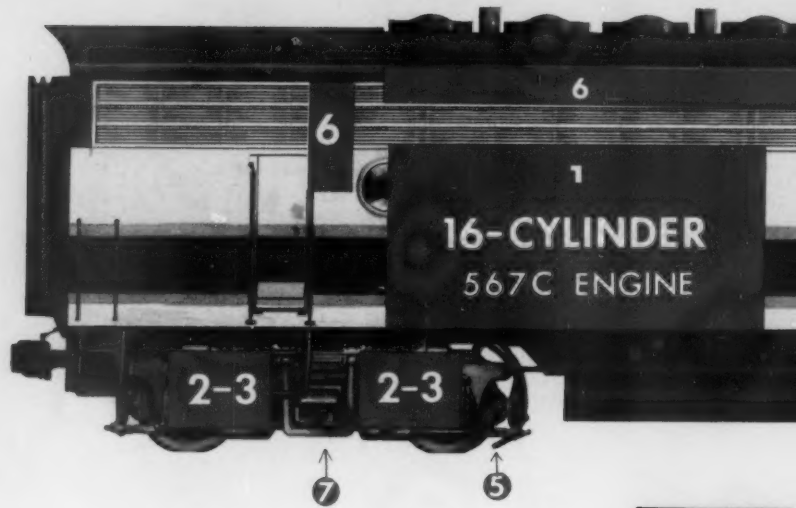
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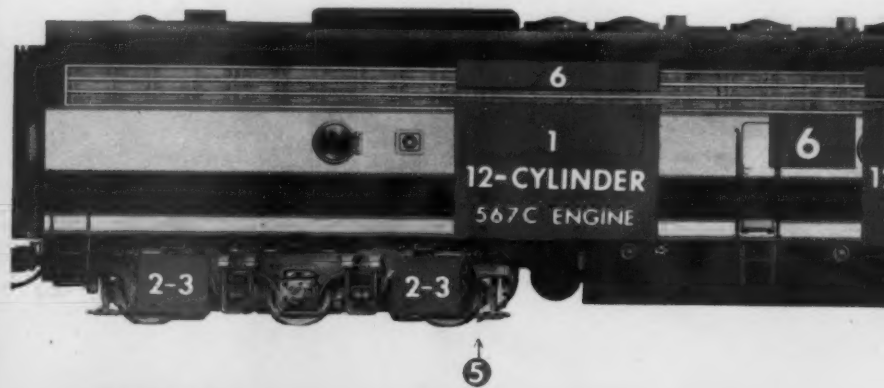
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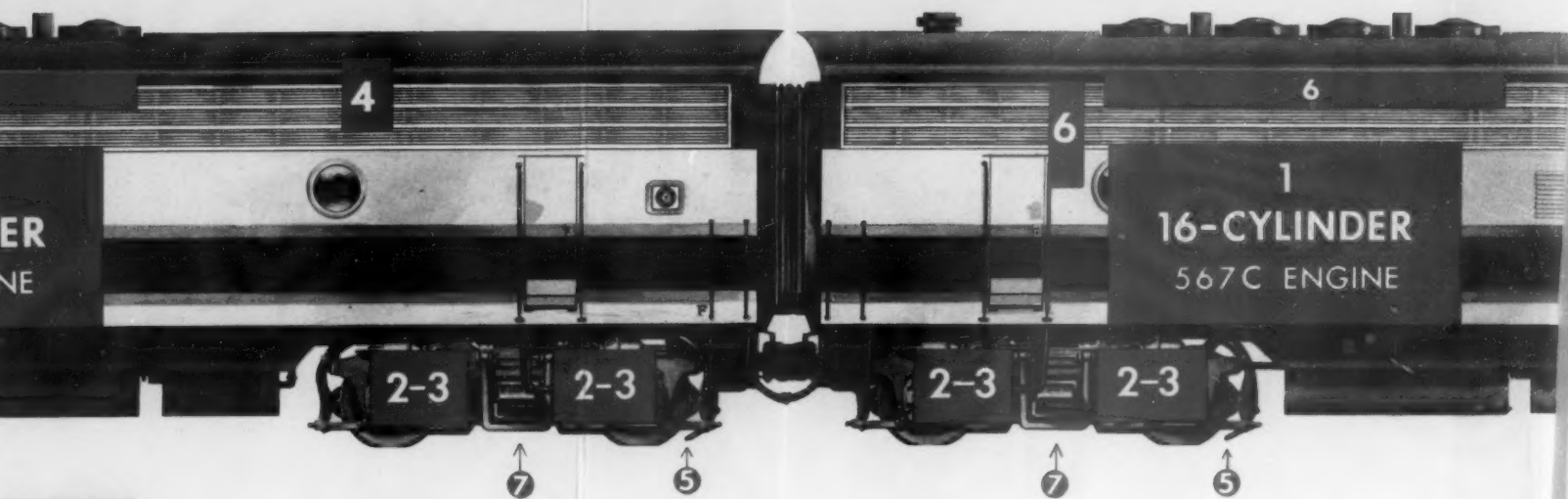
**F
9**



Effort * Longer

TORS

LOCOMO

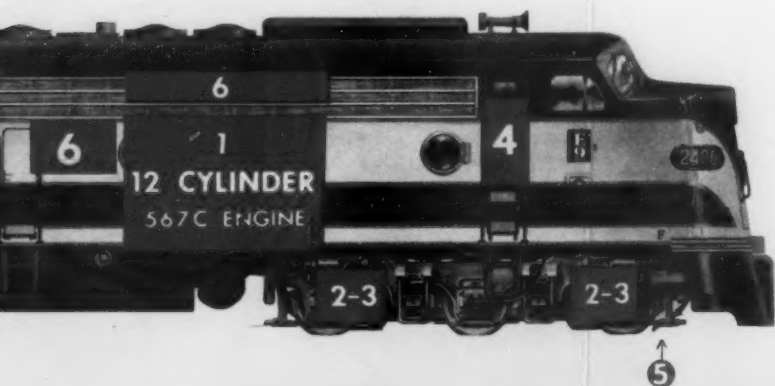


F9

F9—1750 H.P. Freight and Heavy-Duty Passenger Locomotive. This great new combination freight and passenger locomotive is powered by the new 16-cylinder 567C engine delivering 1750 horsepower to the main generator for propulsion, with increased cooling capacity for both water and oil. The locomotive has 16⅓% more power and new higher-capacity traction motors—

eliminating the need for short-time ratings in heavy-duty service. As in all models, tremendous improvements in engine design, traction motors and new six-year maintenance-free control apparatus add to useful life and substantially reduce maintenance. Traction motors are re-grouped for greater stability under heavy-load operation. It has new gear case with stable

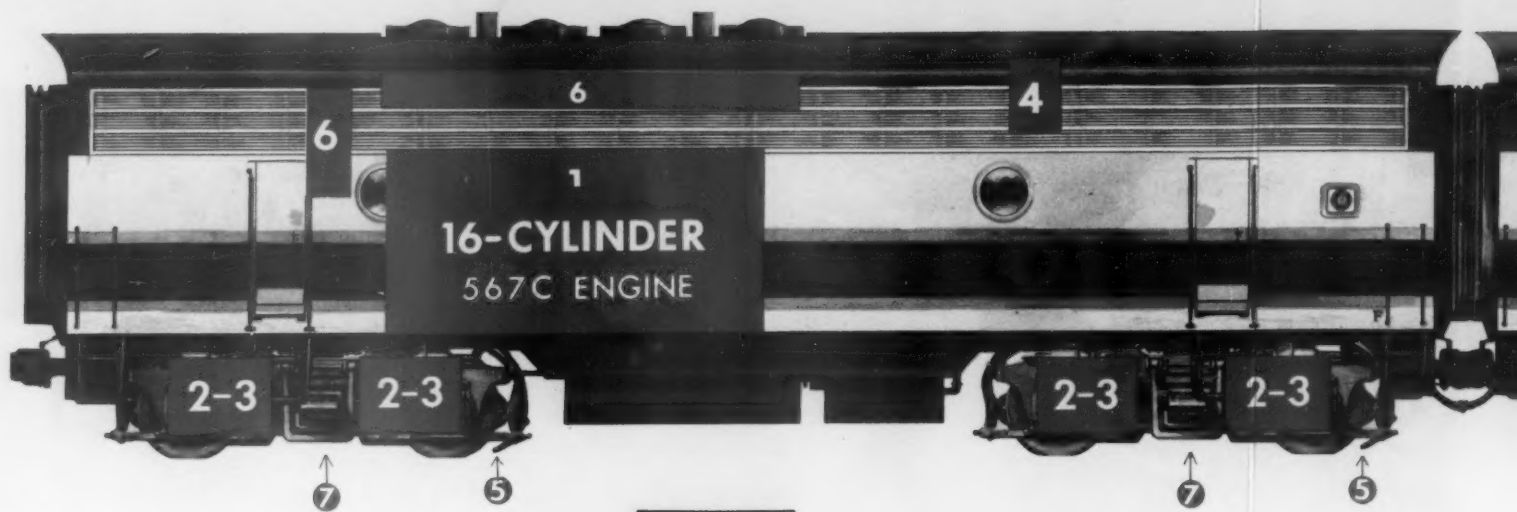
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Life * Lower Maintenance

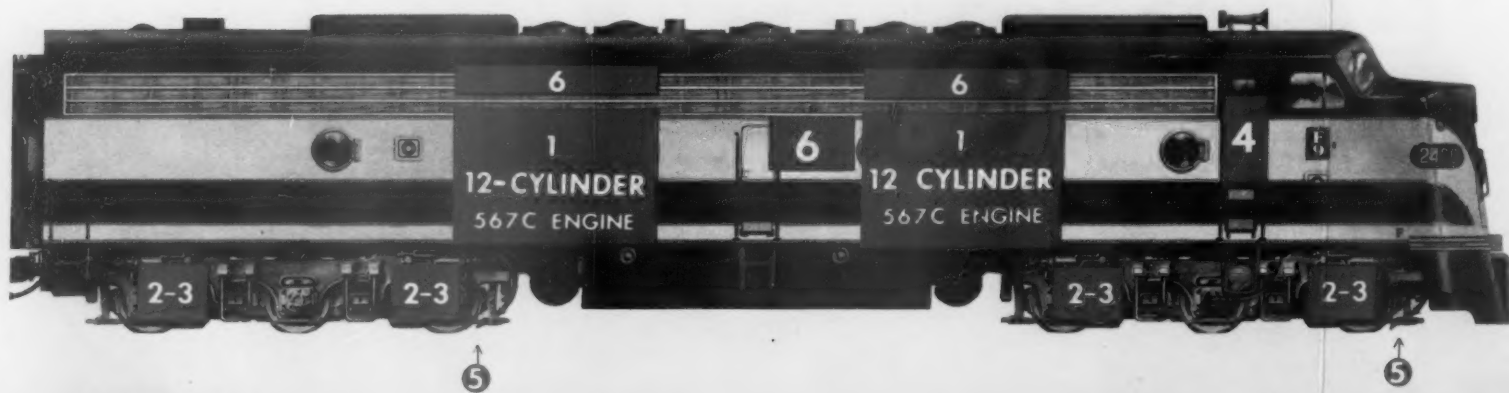
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**F
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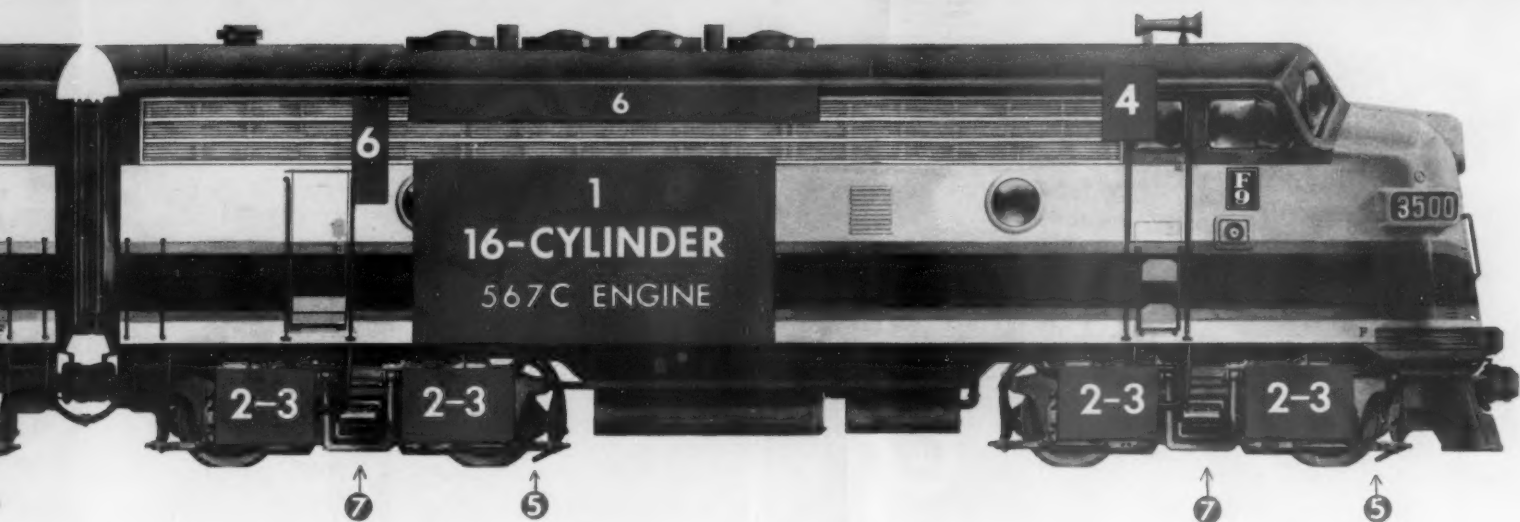
F9—1750 H.P. Freight and Heavy-Duty Passenger Locomotive. This great new combination freight and passenger locomotive is powered by the new 16-cylinder 567C engine delivering 1750 horsepower to the main generator for propulsion, with increased cooling capacity for both water and oil. The locomotive has 16 $\frac{2}{3}$ % more power and new higher-capacity traction motors—

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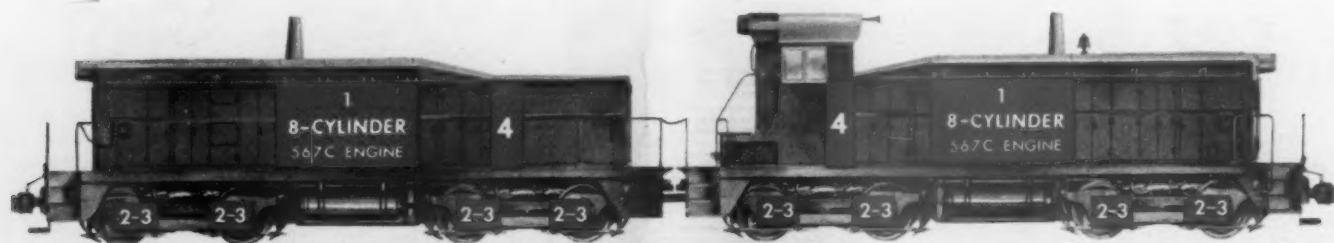
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lubricant, sealed between wheel changes. New wheel-slip control, with automatic sanding in power, insures better adhesion qualities and results in improved performance under slipping conditions. *All of these improvements apply with equal effect to the F9-B and the FP9-A heavy-duty passenger units.*



ver Maintenance Costs

NEW

D-37

TRACTION MOTOR

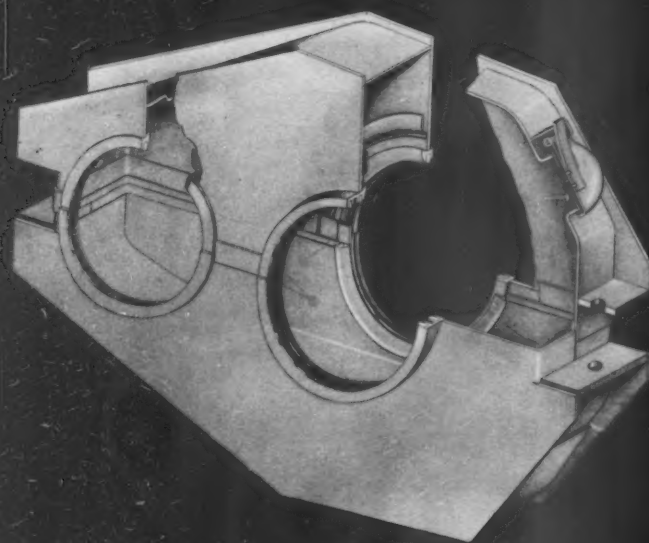
eliminates short-time ratings

NEW

**HIGHER CAPACITY—LONGER LIFE**

Improvements in stator insulation, with a new moulded coil which seals out moisture, permit another substantial increase in traction motor ratings with elimination of short-time ratings in most applications. Along with improvements in electrical performance and mechanical reliability of the field coils, mica in the armature coil pad has been entirely replaced with "Teflon", a new material with a remarkably low coefficient of friction, which reduces chafing. With these developments, both stator and armature of the new D-37 motor can operate at higher ratings with lower temperatures than the D-27 motor. This means longer life and less maintenance—with fewer removals for dipping and baking. The D-37 motor also incorporates the recently developed sealed lubricant armature bearings and a new moulded polyester glass insulated brush holder which can withstand flash-overs without damage.

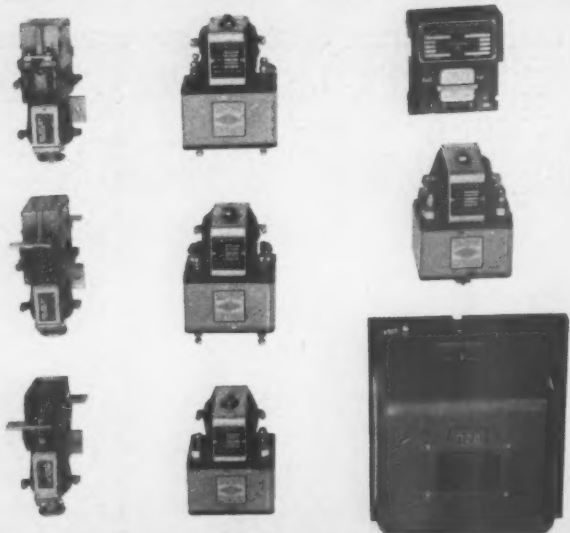
*Trade-mark for Du Pont tetrafluoroethylene resin.

**NEW SEALED GEAR CASE with STABLE LUBRICANT****UP TO TEN TIMES PREVIOUS PERFORMANCE**

A completely redesigned traction motor gear case, with a new stable lubricant, will further reduce maintenance costs on the new General Motors locomotives. In experimental tests, this new case has run for more than a year in heavy service without the loss or addition of lubricant. Barring damage to seals, this new gear case can go at least ten times as far as the previous model without requiring change or addition of lubricant.

NEW CONTROL APPARATUS**—SIX-YEAR MAINTENANCE-FREE**

Electrical control apparatus in the new General Motors locomotives is greatly simplified through the use of newly developed contact materials, and simplified motions which eliminate joints, bearings, complicated linkages and flexible shunts. The new controls, all designed for six-year maintenance-free operation, include: (1) totally enclosed interlocks; (2) new battery field, shunt field and battery charging contactors; (3) new motor shunting contactors; (4) parallel relay; (5) new starting contactors; and (6) solid cam switch contacts.



COMPL

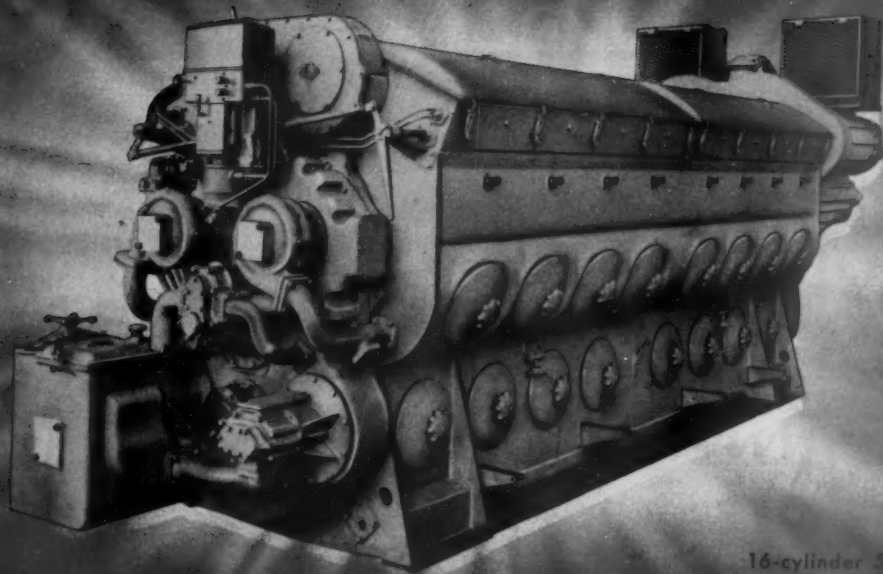
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NEW, MORE POWERFUL

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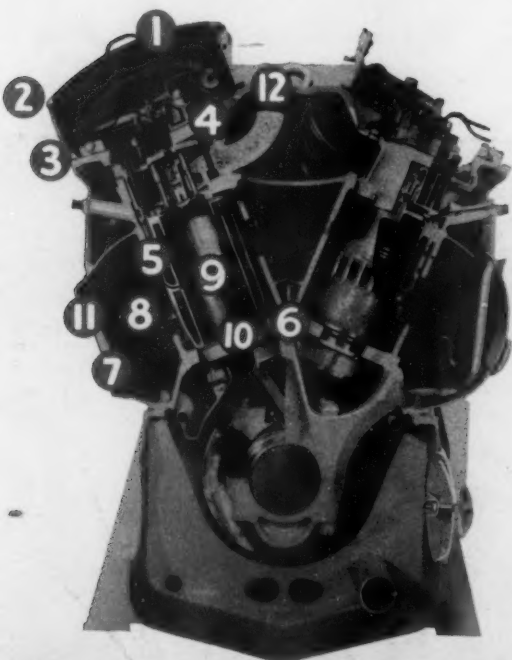
16-cylinder 567C General Motors Diesel engine: 1750 h.p. for propulsion @ 835 r.p.m. Powers new F9, GP9 and SD9 locomotives.

COMPLETELY NEW CRANKCASE designed for longer life, reduced maintenance

Leading the list of advancements in the new General Motors locomotive line is the new 567C Diesel engine. Result of years of engineering development, and patterned on experience gained in powering 70% of the world's main line Diesel trains, the new "C" model of the famous 567 engine features an entirely new crankcase designed for longer service life with greatly reduced maintenance. Frame members are heavier and the stress level of the entire crankcase is reduced. Large water seals on cylinder liners are eliminated through the use of replaceable water inlet manifold with jumper lines individually connected to newly developed liners and heads. Stress plates are no longer subject to corrosion by water. New synthetic seals are designed to seal oil in—seal dirt out. And

a new replaceable wear ring for the lower liner pilot takes wear off the integral part of the crankcase. These major improvements apply in all sizes—6-, 8-, 12- and 16-cylinder engines.

Along with these many features of lower-cost operation, horsepower output of the new "C" engine is increased as much as 17% over the preceding "B" model, through use of larger injectors and slightly higher speeds. Horsepower ratings of the various locomotive models are increased where the higher power output can be effectively utilized. Shown below are noteworthy features of design and construction which contribute to lower-cost, longer-life service of this great new General Motors locomotive engine.



LOOK AT THESE NEW DEVELOPMENTS

① NEW Top Deck Covers,* hinged and latched, permit easy inspection without removing covers.

② NEW Synthetic Rubber Seal* prevents oil leaks at top deck covers.

③ NEW Heavier Cover Frame* with enclosed fuel lines for protection and warmer location.

④ NEW Cylinder Head designed for easier maintenance, longer life.

⑤ NEW Cylinder Liner* with extended water jacket closed at bottom.

⑥ NEW Heavier Frame Members—stronger fabricated frame for greater durability.

⑦ NEW Water Inlet Manifold* does away with water on stress plates, eliminating possibility of corrosion fatigue. Replaceable steel tube manifold requires no welding to crankcase.

⑧ NEW Water Jumper Lines* to individual liners and heads eliminate large, expensive water seals on liners. The only seal used is a small "O" ring at the cylinder head to water discharge manifold jumper—easy to inspect and replaceable without removing major assemblies.

⑨ NEW Trunnion Rod and Piston Carrier* provides increased lubrication, extends life in wrist pin area.

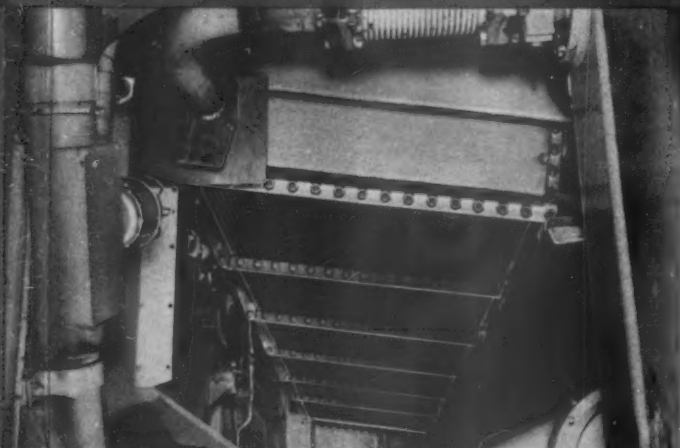
⑩ NEW Replaceable Wear Ring* between liner and stress plate—eliminates wear on crankcase liner pilot bore.

⑪ NEW Handhole Cover with new seals to eliminate oil leaks.

⑫ NEW Exhaust Manifold Cap Screws* replace studs for better stress distribution and stronger fastening.

*Improvements applicable to all 567 engines when modernized.

PLUS MANY OTHER ENGINEERING DEVELOPMENTS
THAT ADD TO SERVICE LIFE AND REDUCE COSTS



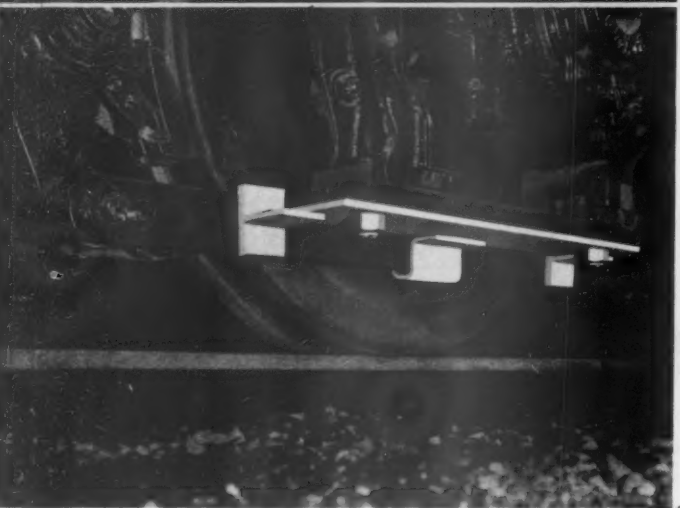
INCREASED COOLING CAPACITY TO ACCOMPANY HIGHER HORSEPOWER

In the new locomotive units where the higher horsepower capacity of the 16-cylinder 567C engine is utilized, engine cooling capacity is increased. Six-inch radiator cores are installed on F9, GP9 and SD9 units for increased water cooling, with necessary modifications of hood and hatch arrangements to accommodate the larger capacity. In the SW9 and TR9 models, cooling fan speed is increased. A new and larger oil cooler, with a 14-fin core replacing the 10-fin core, is installed in F9, GP9 and SD9 units for increased oil cooling.



NEW AUTOMATIC WHEEL-SLIP CONTROL IMPROVES PERFORMANCE— REDUCES MAINTENANCE

New and improved wheel-slip control in all F9, GP9, SD9 and E9 road units results in marked improvement in operation of the locomotive under slipping conditions and at the same time reduces sanding requirements. The system consists, first, of a sensitive creep relay which anticipates slipping and automatically actuates the sander; and, second, an unloading device which automatically reduces power from main generator to traction motors during wheel-slip and then gradually reapplies the power under controlled conditions to effect maximum utilization of available adhesion. The E9 locomotive is also equipped with an improved system of high-speed wheel-slip control. In addition to more effective utilization of increased power and tractive effort, these developments further reduce electrical maintenance by eliminating severe shocks caused by uncontrolled wheel-slips. And reduced sanding means less dust, less cleaning, less maintenance.



NEW BRAKE RIGGING STABILIZER EXTENDS LIFE—REDUCES MAINTENANCE

A newly developed stabilizer, added to the clasp-brake rigging on F9, GP9, and SD9 models, eliminates lateral play in the linkage to extend life and reduce maintenance of this equipment.

ELECTRO-MOTIVE DIVISION GENERAL MOTORS

Home of the Diesel Locomotive



La Grange, Illinois

Labor & Wages

(Continued from page 10)

can contract with its employees about what other railroads will do on their own lines, yet such a contract is demanded from each railroad.

"Similarly, each railroad is asked to enter into a contract with its employees that the particular railroad will give free transportation on its trains to employees of all other railroads—and to all the wives and dependents of those other employees. The enormity of such a demand is obvious from the fact that there are more than 1,200,000 employees on American railroads. Whether the Union Pacific, for example, will run its passenger trains free for the millions of people involved, who do not even work for the UP and have no relationship with it except as passengers, is certainly not a proper subject for contract between the UP and its employees."

Strike Vote—The 15 non-operating unions represent nearly one million railroad employees. They had authorized a strike vote prior to the start of the union-carrier conferences in Chicago on November 3 and have invoked the services of the National Mediation Board in settlement of the demands (*Railway Age*, October 25, page 13).

The demands upon which the carriers offered to negotiate include:

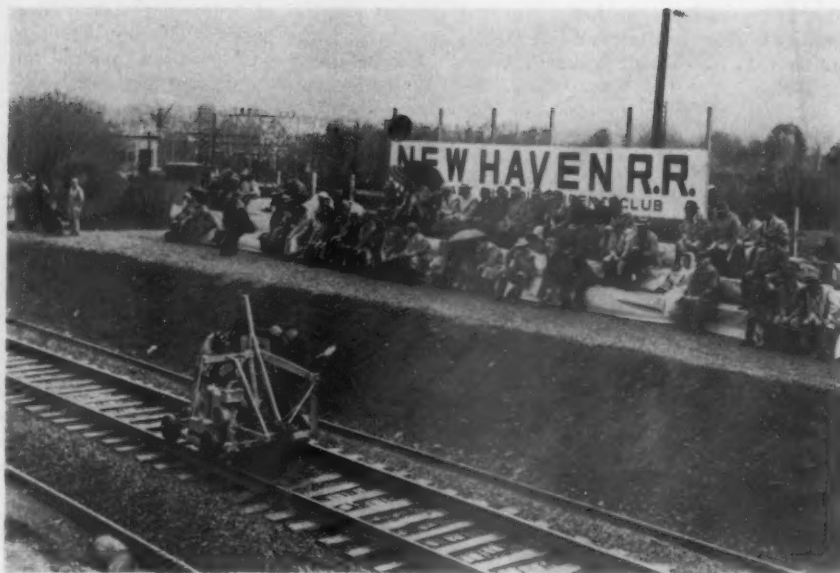
- Paid vacations of from one to four weeks, beginning with one week for one year's service and increasing to four weeks after 15 years;
- Seven paid holidays with triple pay for any work on such days; and
- Time and one-half for Sunday work.

Public Relations

Mechanized Rail Laying Impresses Public

Despite rainy weather, about 200 business men and women and representatives of the press journeyed from many southern New England towns to Plainfield, Conn., on October 29 to watch the New Haven's mechanized rail train lay new 115-lb. steel on the road's Norwich branch. As the parade of bolters, spike pullers and extruders went past, the *Railway Age* observer heard remarks from spectators which indicated they were favorably impressed by the modernity on display. One man ventured the opinion that railroads "had come a long way in the last 15 years" in their efforts to "stay in business." Another told our reporter that he guessed railroads were a "lot more modern than I thought."

At press time for this issue, the New Haven indicated it had received a "good press" in Hartford, New Haven,



THE "SIDEWALK SUPERINTENDENTS' CLUB" watches a spike puller in action. The New Haven had

track supervisors and other maintenance-of-way personnel on hand to help newspaper men get their stories.

Waterbury and Norwood, Mass., papers.

Weeklies in smaller towns, most of which will cover the story in their issues printed November 5-6, were still to be heard from. The Hartford Courant and the New Haven Register indicated to the railroad they would give the story full-page treatment in future issues of their Sunday magazine sections.

Union Pacific Ads Win "Socrates Award"

For excellence of its newspaper advertising, the Union Pacific has been named winner of the annual Socrates award by Transportation Ad Views of New York. The award is based on a competition between North American rail, air, and bus transportation companies.

"On many occasions," says Transportation Ad Views, "advertising of the Union Pacific promoted the best interests of community and country. Farmers and ranchers, neighbors and customers have been shown outstanding consideration and the welfare of all those whom it serves has received considerable attention in the UP's institutional presentations." The award also cited UP ads for honesty, good taste and excellence of copy, artwork and layout.

Word of the award has been received by H. B. Northcott, general advertising manager of the UP, which employs the Caples Company, of Chicago, Omaha and Los Angeles; the Gillham Advertising Agency, of Salt Lake City; and Richard G. Montgomery & Associates, of Portland, Ore. Two previous annual awards went to the Southern Pacific.

Operations

Examiner Would Drop Complaint Against SP

Dismissal by the Interstate Commerce Commission of a complaint alleging that the Southern Pacific failed to provide adequate car service in western Oregon has been recommended in a proposed report by Examiner O. L. Mohundro.

The complaint was filed in November, 1950 and the proceeding is docketed as No. 30708. The complainant, Shippers Car Supply Committee, is described in the proposed report as "a non-profit corporation of Oregon dedicated to the purpose of improving the freight car supply and the quality of railroad service, especially in western Oregon."

"Send Cars Home," Is Faricy Appeal

President William T. Faricy of the Association of American Railroads has appealed to executives of the association's member roads for assistance in securing improved observance of Car Service Rules.

The appeal was embodied in a circular which said that the seasonal decline in carloadings which occurs in the late fall and early winter months provides a good opportunity for observance of the rules and relocation of cars to owning lines. Mr. Faricy suggested that operating and transportation officers be directed to:

- (1) Stress Car Service Rule 1, so that improved relocation of cars to

home rails shall not be lost by use of these cars for loading off-line when foreign cars of suitable ownership can be used.

(2) Make efforts to secure from shippers, to the fullest practicable degree, advance orders for empty cars, showing destination and routing of shipments, to enable selection and placing of proper ownerships.

(3) Enlist individual shipper support in the matter of selecting cars for loading (as between the empty cars available at loading platforms) so that the loadings will, to the fullest practicable extent, advance the cars toward owners' rails.

All Our Known Fuel X 23

The potential energy available in known sources of fissionable material—uranium and thorium—is now estimated to be 23 times as great as that which is available from all other known sources of combustible fuel—coal, oil and gas. This statement was made by one speaker at the Second Annual Conference of the National Industrial Conference Board, held in New York October 29-30. The statement was substantiated by others who estimated the relationship to be between 20 and 25 times.

For 90 Centuries — Since the values of energy under consideration are so great, a new unit, Q, has been created. Thus, one Q=10¹⁸ B.t.u.; it is calculated that the world is now using energy at the rate of about 20Q per century. The amount of energy now estimated to be available in uranium and thorium is 1,800Q.

All this energy, however, cannot be put to work immediately. It will first be necessary to develop suitable power plants with chemical procedures which will breed more fuel than they burn and which will restore exhausted fuel, to the end that nearly all the energy in the material will be used.

An announcement has been made

that the United States government has engaged the services of the Westinghouse Electric Corporation to build an atomic energy plant which will develop 60,000 kw. This is an undertaking which will probably take several years.

At the present time, in this country, under the Atomic Energy Act, only the U. S. government can build nuclear power plants or own fissionable material.

A primary purpose of the conference was to try to develop means whereby the potentials of American industry could be employed to further such developments. This would, of course, require some modification of the Atomic Energy Act. One reason for accelerating production of power is that in such matters the United States is in competition with other countries, and it would be highly desirable to be able to supply know-how to countries from which we obtain source material.

During the discussion, mention was made of the atomic power plants being built for submarines and the opinion was expressed that such power could be used advantageously on many ships and perhaps also on airplanes and even locomotives. No one showed much enthusiasm toward an immediate locomotive application, but the possibility was not ruled out.

B&O Now All Diesel East of Cumberland

Full dieselization of all Baltimore & Ohio freight and passenger service east of Cumberland, Md., became effective at 7:45 p.m., November 3, when the last steam-hauled train in the area—No. 22, the "Washingtonian"—arrived at Baltimore.

Conversion to diesel operation of territory east of Cumberland was made possible by receipt of eight new diesel passenger units and seven new all-purpose locomotives. Both groups are part of a current order for 47 units

which, when fully delivered next February, will give the B&O 848 diesel units. With equipment now on hand, 77 per cent of the railroad's freight service, 70 per cent of its passenger-train-miles, and 67 per cent of its yard switching are handled by diesels.

I.C.C. Lets Roads Pool Nashville-Memphis L.C.L.

The Louisville & Nashville and the Nashville, Chattanooga & St. Louis have obtained Interstate Commerce Commission approval for pooling their less-carload traffic and service between Nashville, Tenn., and Memphis (*Railway Age*, August 31, page 10).

The traffic will move via the NC&StL. The L&N will discontinue its separate service, but will continue to solicit l.c.l. traffic for the joint movement.

Purpose of the pooling arrangement is to bring about heavier loading of l.c.l. cars, and to save transit time for shippers. The NC&StL route is several miles shorter, and use of this direct route will save up to a day in transit time.

Meanwhile, as this arrangement was approved by the I.C.C., another working agreement between the two roads was under attack.

A group of NC&StL employees filed a petition with the commission, charging that the roads in 1949 "merged" a dining car run between Evansville, Ind., and Atlanta, Ga. They said this occurred without I.C.C. approval, and the result of the "merger" was displacement of NC&StL employees by L&N employees. They asked the commission to investigate the matter with a view to imposing job-protection rights as provided under Section 5 of the I.C. Act.

The commission docketed the case as No. 31381, and directed the NC&StL to satisfy the complaint or submit to the commission a statement of its position.

Inspections Proposed For Self-Propelled Cars

The Interstate Commerce Commission has issued a revised version of its proposed rules and instructions for inspection and testing of multiple-unit equipment, i.e., electrically-propelled cars operated by a single set of controls.

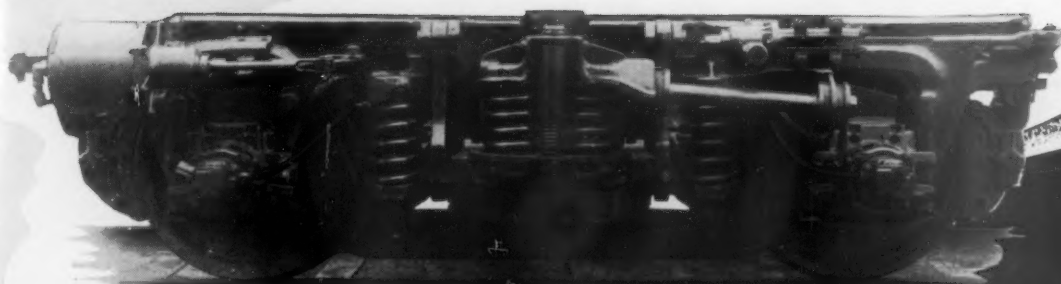
The proposed rules came out of the commission's Ex Parte No. 179 investigation of the matter. The inquiry was instituted in 1951 after the Brotherhood of Locomotive Engineers and the Brotherhood of Locomotive Firemen & Enginemen had filed petitions asking that present locomotive inspection rules be extended to include multiple-unit equipment (*Railway Age*, March 12, 1951, page 91).

Last year, the commission issued a (Continued on page 38)

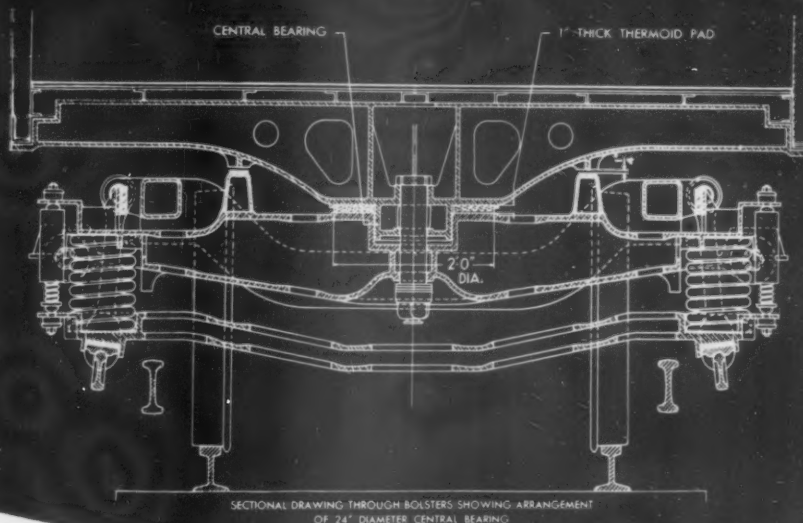
When Your Freight LEAVES East St. Louis or Memphis on TUE	
... it ARRIVES at these Cotton Belt Destinations	FORT BERRY, ARK. Wed AM SHELBYVILLE, KY. Wed PM TEXARKANA, ARK. Wed PM CORSCAMMA, TEN. Wed PM DALLAS, TEN. Thu AM FORT WORTH Thu AM WACO, TEX. Thu AM
... and at these Southern Pacific Destinations	HOUSTON, TEX. Thu AM SAN ANTONIO, TEX. Thu AM EL PASO, TEX. Fri AM PHOENIX, ARIZ. Sat AM LOS ANGELES, CALIF. Sat PM SAN FRANCISCO, CALIF. Mon AM

A GLANCE AT THIS "SCHEDULATORY" tells shippers and receivers of freight when their shipments will arrive at certain Cotton Belt and Southern Pacific points. A pull on the tab (right) indicates the day

shipments will arrive at various key points after having left East St. Louis or Memphis on any day of the week. The reverse side of the 3-inch by 6 1/4-inch device shows East St. Louis arrival times.



Commonwealth Passenger Car
Truck with Outside Hanger
Spring Suspension



For a

Better Ride

and Less Upkeep Costs...

It is a fact that a smoother, more comfortable ride attracts more passenger traffic. A proven way to assure the utmost in riding comfort and at the same time reduce maintenance costs is to equip your passenger train cars with Commonwealth Outside Swing Hanger Type Trucks and Central Bearings.

On existing cars or new equipment, this latest design truck assures easier riding at all speeds with reduced car body roll. Swing hangers and bolster springs are

located on the outside of the truck, readily accessible for inspection and maintenance. The new Central Bearing eliminates truck shimmy and side bearing problems, increases wheel mileage between turnings, and requires no lubrication.

For greatly improved riding comfort, plus substantial savings in upkeep costs, equip your present or new equipment with Commonwealth Outside Swing Hanger Trucks and the new Central Bearings.



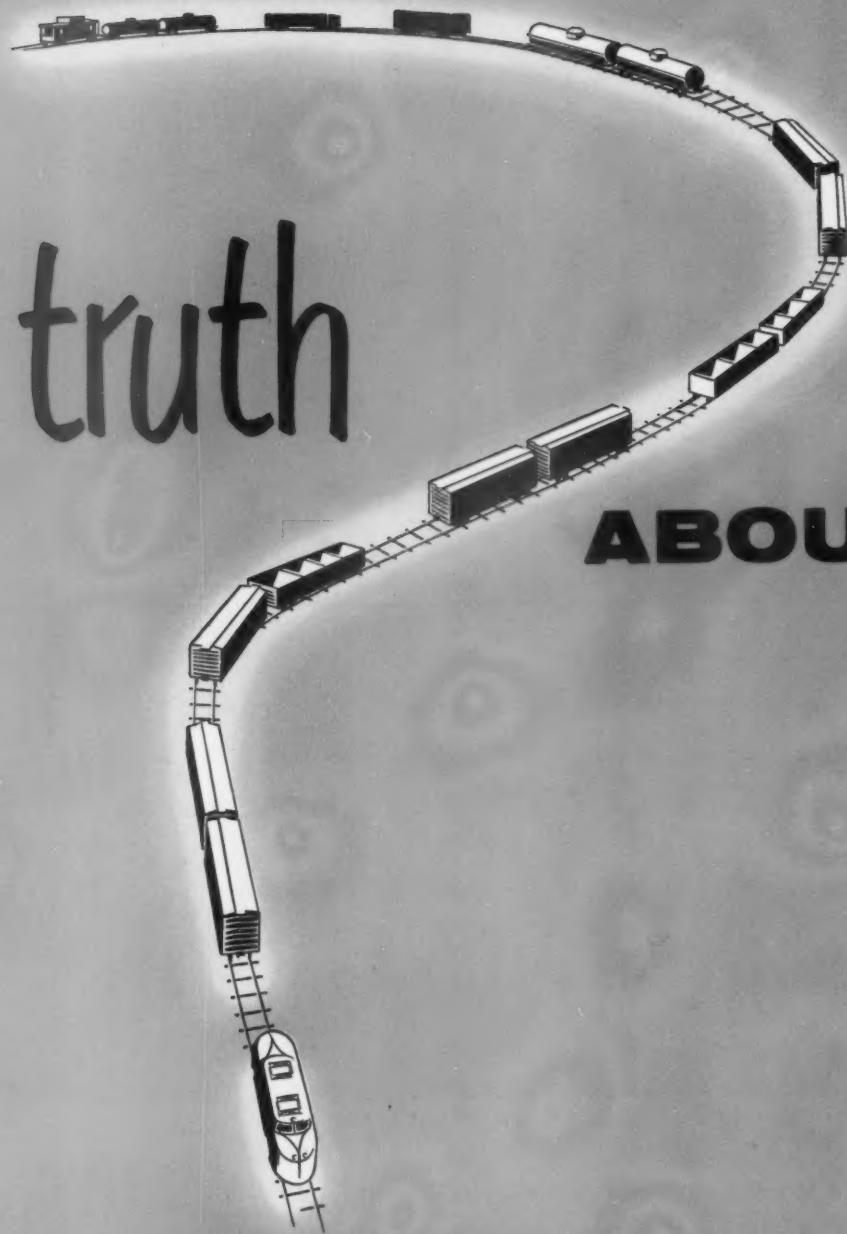
GENERAL STEEL CASTINGS

GRANITE CITY, ILL.

• EDDYSTONE, PA.

the truth

ABOUT THEM



CAR BUILDERS TOM

Reports from Big Shippers show that they are often forced to seek other means of transportation during peak shipping seasons because there aren't enough box cars, flat cars, and other specialized equipment to go around.

The AAR's own figures put these seasonal equipment 'shortages' at nearly 100,000 units.

FREIGHT CAR SHORTAGE

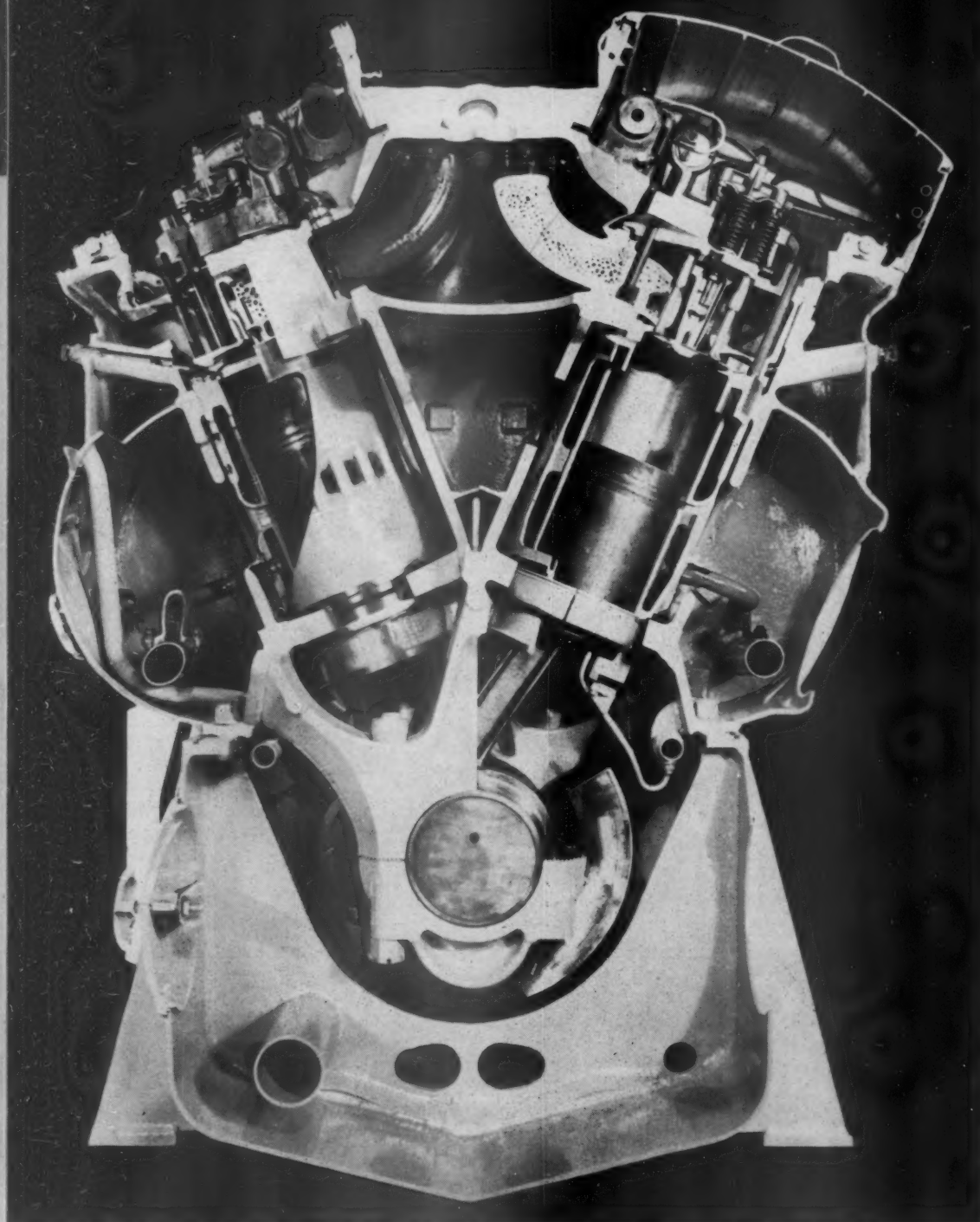
While the shortage may be only temporary, it too often has a permanent effect on the shipping habits of your most profitable customers and prospects. Every day, freight business that should go by rail is being lost.

The soundest way to get and hold this business is through long range car-purchasing plans based on careful, detailed study of both present *and future* business potential.

An A.C.F. Representative will be glad to help. His knowledge of both shipping problems and the latest car construction techniques can help you more quickly resolve many difficult problems. American Car and Foundry Company, New York • Chicago • St. Louis • Philadelphia • Washington • Cleveland • San Francisco

AMERICA'S RAILROADS

A.C.F.



"BEEFED UP" is the term Electro-Motive engineers use to describe the new 567-C series diesel engine here shown in cut-away. Many of its developments can be applied to previous 567 series engines. Highlights include: An entirely new crankcase design with heavier frame members and lower stress levels; new hinged and latched top deck covers; a heavier cover frame that encloses fuel lines to provide them a warmer location; newly developed cylinder heads and liners; replaceable water inlet manifold jumper lines instead of large water seals on cylinder liners and heads; new trunnion rod and piston carrier that provides more effective lubrication; new handhole covers with leak-tight seals; and screw-secured exhaust manifold caps. Although the weight of the new engine is slightly greater than previous models, there has been no increase in its size.

GM Announces 10 New Models

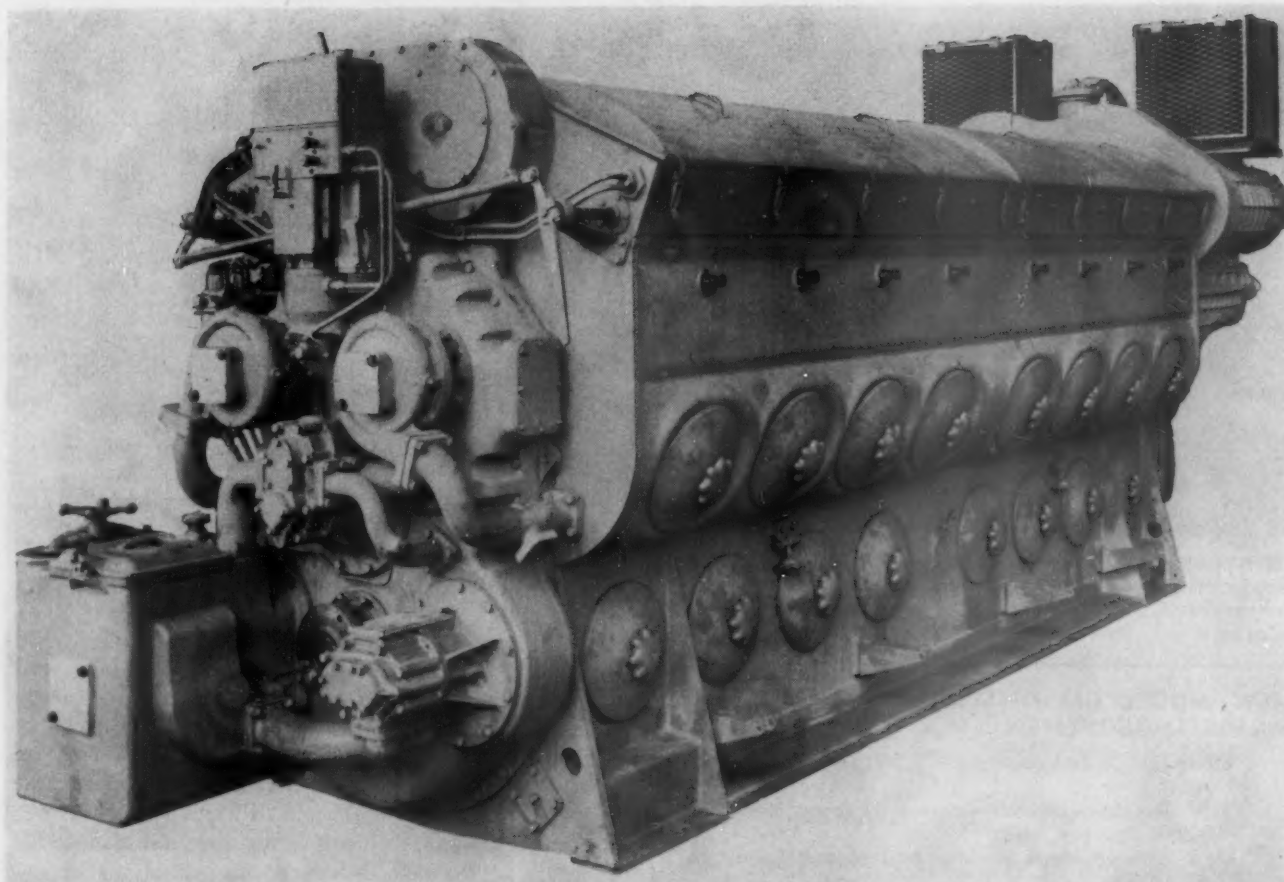
An increase in propulsion power of a four-unit diesel freight locomotive from 6,000 to 7,000 hp. is one of the improvements in a new line of ten types of railroad motive power just announced by the Electro-Motive Division of General Motors Corporation. This is 1,600 more horsepower than the rating of the first U. S. diesel freight locomotive, brought out by Electro-Motive in 1940, and reflects the technological advances in GM diesels over a period of 13 years.

Deliveries of the ten types of new locomotives from E-MD plants in LaGrange, Ill., and Cleveland, Ohio, will begin in January 1954, according to N. C. Dezen-dorf, vice-president of General Motors and general

manager of Electro-Motive Division. Each new model is marked by upgrading of its capabilities over those of the current models.

Most of the increases in ratings or in service life stem from the introduction of a new General Motors diesel engine, the 567C series, upon which Electro-Motive engineers have been working for five years, and from a new traction motor which has been so greatly improved that it has, in Mr. Dezen-dorf's words, "made possible the elimination of arbitrary short-time ratings for all models and all gear ratios."

The new models are the result of development projects continuously carried on at Electro-Motive with the

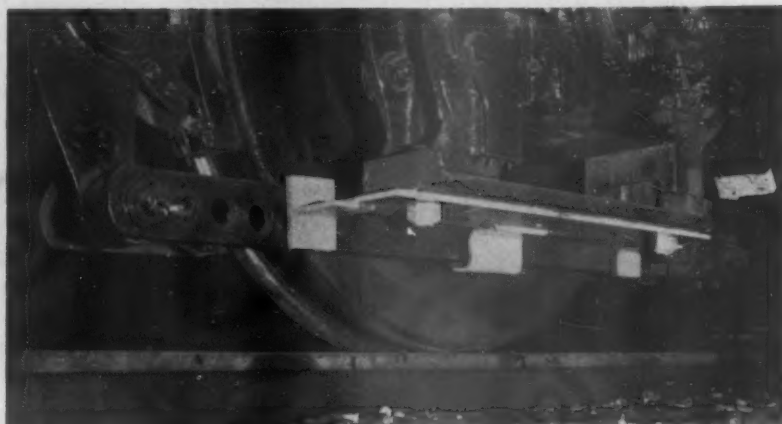


HEART OF THE NEW SERIES is this new, more powerful engine—the 567-C. The 16-cylinder version shown here

provides 1,750 hp. for propulsion. Six-, eight- and twelve-cylinder models offer the same major improvements.



TRACTION MOTORS have higher capacity and arbitrary short time ratings have been eliminated for all models and all gear ratios. One factor is the newly designed field coils (left) which are moisture-proofed by



molded silicone rubber insulation. **BRAKE RIGGING STABILIZER** (right) prevents lateral play in linkage of clasp brakes; a new, automatic wheel slip control and automatic sanders are other new features.

objective of improving performance, lengthening the life of locomotives and reducing maintenance costs. The new traction motors, with the higher ratings of the new 567C diesel engine, make it possible to haul more tons or haul the same tonnage faster.

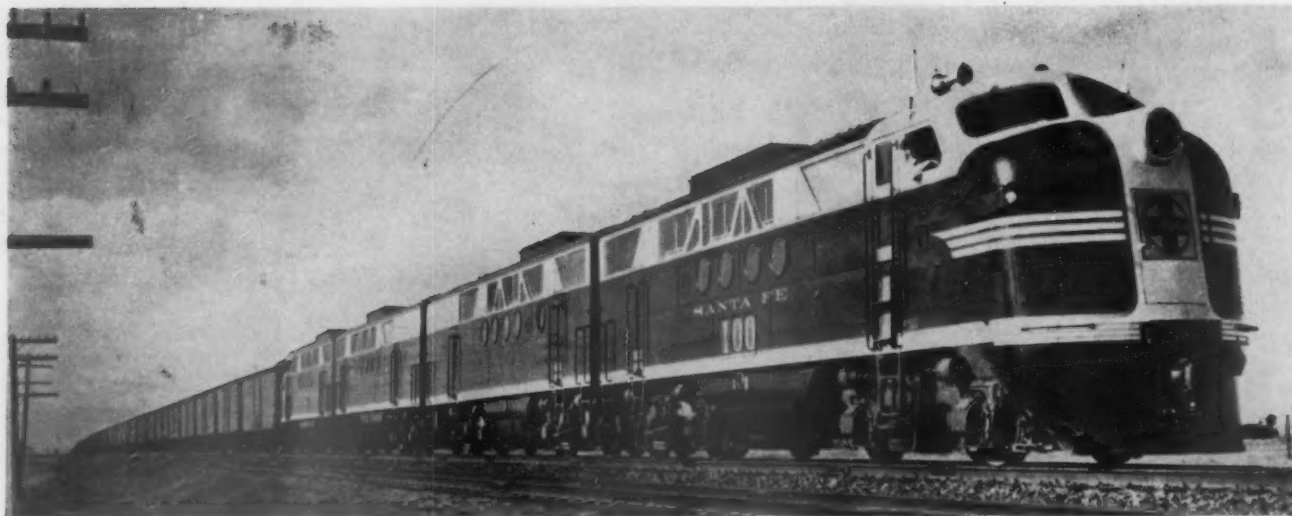
Other major improvements in the new locomotives include a new sealed gear case with a newly developed stable lubricant said to give up to ten times the previous lubricant performance. Test runs with this gear case have been made on western railroads for over a year in heavy service without loss or addition of lubricant.

Electrical control apparatus has been greatly simplified

through the use of newly developed contact materials and more direct mechanical motions eliminating joints, bearings, complicated linkages and flexible shunts. The new controls are designed to provide six years of maintenance-free operation.

New wheel slip control and automatic sanding equipment has been designed to utilize effectively the greater horsepower and tractive force. New engine cooling capacity and a new brake-rigging stabilizer are other outstanding features. Air compressor capacity has been increased by increasing compressor speed.

The new engine in the 16-cylinder version provides



THIRTEEN YEARS AGO this, the grand-daddy of all road freight diesels, developed 5,400 hp. Its counterpart in the

new series—four F-9 type units—develop 7,000 hp. for propulsion. Yet outwardly, they look quite similar.

NEW MODEL GM DIESELS AND THEIR MAJOR IMPROVEMENTS

F9 freight*—Increased from 1,500 to 1,750 hp. per unit.

FP9 freight-passenger—Increased from 1,500 to 1,750 hp. per unit.

GP9 general-purpose—Increased from 1,500 to 1,750 hp.

SD9 special-duty—Increased from 1,500 to 1,750 hp.

E9 high-speed passenger—Increased from 2,250 to 2,400 hp. per unit.

SW 600-hp. yard switcher—Increased life of components.

SW 900-hp. yard switcher—Increased from 800 hp.; more durable parts.

SW 1,200-hp. yard switcher—Increased life of components.

TR9 transfer—Increased from 1,600 to 1,800 hp.

TR12 transfer—2,400 hp.; increased life of components.

*Or heavy-duty passenger

1,750 hp. for propulsion. Its maximum speed is 835 r.p.m. as compared with 800 r.p.m. for its predecessor. Its size has not been increased. This 16-cylinder engine powers the F9, FP9, GP9, and SD9 models. The engine in all sizes (6, 8, 12 and 16 cylinders) has an entirely new crankcase designed for longer service life. Frame members are heavier and the stress level of the entire crankcase is reduced in spite of the higher horsepower output.

Large water seals on cylinder liners and heads are eliminated through the use of replaceable water inlet manifold jumper lines, individually connected to new liners and heads. Stress plates no longer are subject to corrosion by water. New and small synthetic seals are used and a new replaceable wear ring for the lower liner pilot takes wear off this integral part of the crankcase. The engine incorporates high output injectors and improved cylinder-head cooling.

A new molded coil which seals out moisture permits a substantial increase in traction motor ratings with the

elimination of arbitrary short time ratings. Along with the improvements in electrical performance and mechanical reliability of the field coils, mica in the armature coil pad has been entirely replaced with "Teflon," a new insulating material, which reduces chafing because of its remarkably low coefficient of friction.

With these developments both the stator and the armature of the new motor can operate at higher ratings with actually lower temperatures than its predecessor. The new motor also incorporates the recently developed sealed lubricant armature bearings and a new molded polyester glass-insulated brush holder designed to withstand flashovers without damage.

In the new locomotives where the higher horsepower capacity of the 16-cylinder 567C engine is utilized, engine cooling capacity is increased. Six-inch radiator cores are used instead of 4-in. cores on the F9, FP9, GP9 and SD9. In the SW9 and TR9 models, cooling fan speed is increased. A larger oil cooler, with a 14-fin core replacing the 10-fin core formerly used, is installed in F9, GP9 and SD9 units to give increased oil cooling.

New and improved wheel-slip control equipment is used in F9, FP9, GP9, SD9 and E9 locomotives to give improved operation under slipping conditions and at the same time reduce sanding requirements. The system consists, first, of a sensitive creep relay which anticipates slipping, automatically applies sand and reduces power from main generator to traction motors during wheel slip; then gradually reapplies the power under controlled conditions to effect maximum utilization of available adhesion. The E9 also is equipped with an improved system of high-speed wheel-slip control. In addition to more effective utilization of increased power and tractive force, these developments tend to reduce electrical maintenance by eliminating severe shocks caused by uncontrolled wheel slips.

The high degree of interchangeability of parts between engine sizes and with earlier models of the General Motors 567 series diesel engine, which has been traditional at Electro-Motive, is maintained in the new 567C series.

Questions

and Answers FOR THE TRANSPORTATION DEPARTMENT

Remember this question? . . .

A Great Northern box car was loaded by an industry located on Nickel Plate rails at Cleveland. Its destination was Portland, Ore.; it was routed Nickel Plate, Burlington, Northern Pacific, Spokane, Portland & Seattle. Is this a violation of car service rules?

WATCH FOR ANOTHER QUIZ on proper application of cars for loading under car service rules. It will be somewhat similar to the one in the issue of July 6.

CONDUCTED BY G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly news issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

Here's another point of view.

On October 12, we said: "Yes. It's a violation in principle." But a Car Service Division officer differs with us.

"I do not agree that the loading of [the] . . . car . . . is a violation of car service rules, either in principle or otherwise.

"The fundamental concept of car service rules is to get cars home. The best possible handling in compliance with such rules is to load cars to or via owner's rails. This car was not so loaded. The next best possible compliance is to load a car so that, at destination, it is at a junction point with the owner. . . . When this car was made empty at Portland, Ore., it was at a junction with the owner.

"It follows that all the discussion about distance from owner's rails at destination as compared to loading point has no connection with the loading of this particular car. Even here, however, I find something wrong. It is stated that if the destination of this

car had been San Francisco rather than Portland, then there would have been violations of both Paragraphs 2 and 5 (of Car Service Rule 3) because San Francisco is more distant from any junction with the Great Northern than is Cleveland. A GN car at San Francisco is 393 miles from the nearest connection with the GN, which is at Bieber, Cal. A GN car at Cleveland is 777 miles from the nearest connection with the GN, using the mileage on the Nickel Plate, Cleveland to Chicago, and the CB&Q, Chicago to Twin Cities.

"Mr. Randall seems to feel that because this car was routed Northern Pacific in a territory where it could have been routed via the owner justifies a conclusion that it is a violation of the principle of the rules. The rules speak for themselves, and if a car is loaded in accordance with any of the options in the rules, it is not a violation."—A. F. Swinburne, executive assistant, Car Service Division, A.A.R.

Maybe Rule 3 should be revised.

Mr. Swinburne has clearly stated the technical application of the rule with respect to the theoretical case cited. He has, too, very properly "caught us up" for overlooking the junction of the GN at Bieber. Obviously, a destination more than 777 miles from Bieber should have been selected for the theoretical destination.

In the "caption" on our October 12 comment we did not intend to imply that there was a technical violation of the rule, but *did* have in mind that the markings on the car should have suggested to those concerned at point of origin that, if at all practicable, the car owner should have been given the routing, to participate in the freight revenue.

Mr. Swinburne states that loading a car to a junction with the home road is "next best" to loading it via the home road. This may be so, but there is a vast difference in these two applications so far as the car owner is concerned. In the illustration used, the GN car when released at Portland could have been loaded by the unloading road, under Rule No. 2, to any point so long as the GN participated in the freight rate, no matter for how short a distance. It might, for example, have been routed SP&S-NP to Fargo, N. D., for GN delivery at Campbell, Minn., 62 miles east of Fargo. The car then would have moved loaded from St. Paul to Portland and back to Fargo, over 3,000 miles, via a completing road, and only 62 miles via the owning road. Had it been routed via the owner on the westbound move, the owner not only would have partici-

pated in the freight rate but would have had the car in its possession at destination.—all in accordance with the technical application of the rule.

The car service rules, good as they are, contain many loopholes for those looking for them. For example: Without technical violation, an MP car at Oakland, Cal., (WP) can be loaded to Boston (New Haven delivery) via other than MP because Boston is nearer Dupon, Ill., than Oakland is to Pueblo, Colo. Then this car, at Boston, can again be loaded under Rule 3-A-2, to any destination nearer a home junction than at origin, and so on. I doubt that the framers of the rule had in mind approving such usage, yet the rules "permit" it. Possibly the "distance measuring stick" ought to be reviewed, with a view to applying some limiting factor for destinations, such as to a point within a home district or a district contiguous to a home district.

As evidenced by the first usage choice spelled out in Car Service Rules 2 and 3, the fundamental concept of the rules is not only, as Mr. Swinburne says, to get cars home, but also to load them so the owner shall participate in the freight rate whenever that is practicable. If carriers would emphasize this principle more frequently, shippers would, I am sure, recognize the reasonableness of it and whenever practicable would route accordingly. Such recognition would stimulate some roads, possibly, to own more cars, because of the likelihood of their getting more revenue miles out of their own cars.—G.C.R.

This may jolt you, but you should know...

Your 3-year old car heating systems are obsolete and wasteful!

The Honeywell Simplified Car Heating Systems are responsible

That *is* a shocker, but *you* should know about it. Minneapolis-Honeywell started a revolution in car heating systems for existing cars when it entered the railroad field just a few short years ago.

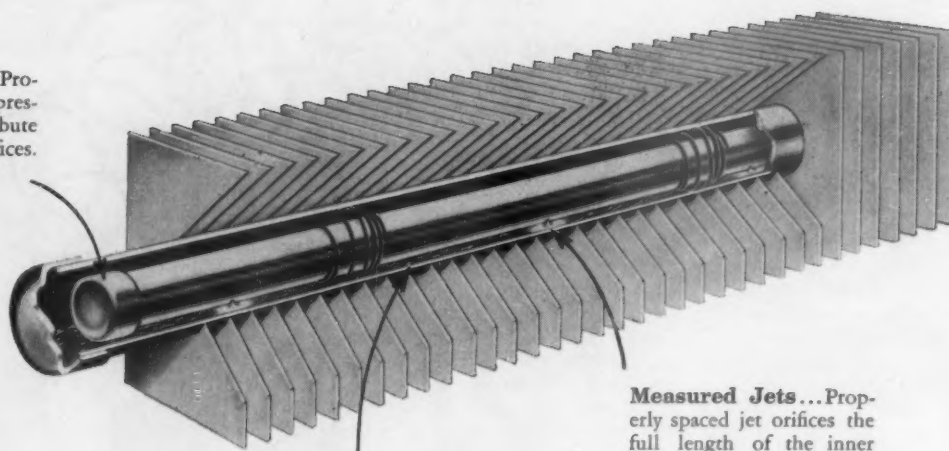
To improve the equipment then on the market, Honeywell developed a simple electronic control system with properly engineered heat distribution *throughout the car*. This system set a new standard of reliable performance and forced improvements in all passenger car heating!

So, review *your* car heating systems. If you have the new Honeywell Multi-Jet Steam System, your passengers are comfortable in *all* kinds of weather—and *you* make *substantial* savings because of much lower operating and maintenance costs.

If your cars do not have the new Honeywell system, you can install it as a standard shopping procedure easily and economically. Honeywell pioneered modern car heating systems and will continue to lead the way toward better and more reliable car heating.



Pressure Cap . . . Provides positive steam pressure to efficiently distribute steam through jet orifices.



Free Flow Return . . . Speeds up heat circulation, prevents waterlogging of system.

Measured Jets . . . Properly spaced jet orifices the full length of the inner radiation tube provide even steam distribution the full length of the car.

Here's how the new Honeywell Multi-Jet System works

This cut-away shows how orifices are positioned in the inner radiation tubes. A pressure cap is placed at the end of the steam distribution tube to insure *full-length* radiation under *all* heating loads. This prevents "heat pile-up" and creates even heat distribution for a pleasant, comfortable trip for your passengers.

You cut costs 3 ways with the new Honeywell System :

1. **You save fuel** because there's less under-car piping—therefore less steam waste. Steam savings have been in excess of 40% over existing systems in some cases.
2. **You lower maintenance** because fewer valves and less piping are needed in the Honeywell System . . . the Multi-Jet steam distribution eliminates unnecessary duplication of equipment.

Moduflow Liquid System for new cars

Tests have convinced more and more railroads of the superiority of low-cost Moduflow *Liquid* Heating System for new passenger cars. Passenger reactions were checked on actual trips, and they heartily approved the uniformly comfortable cars . . . even when outdoor temperatures ranged from 7 to 72 degrees! We strongly recommend this *Liquid* Heating System, and will be glad to send full details on request.

3. **You reduce road failures** because rugged railroad operating conditions don't hamper Honeywell's dependable electronic control system and steam specialties.

How the Railroads Benefit from Competition

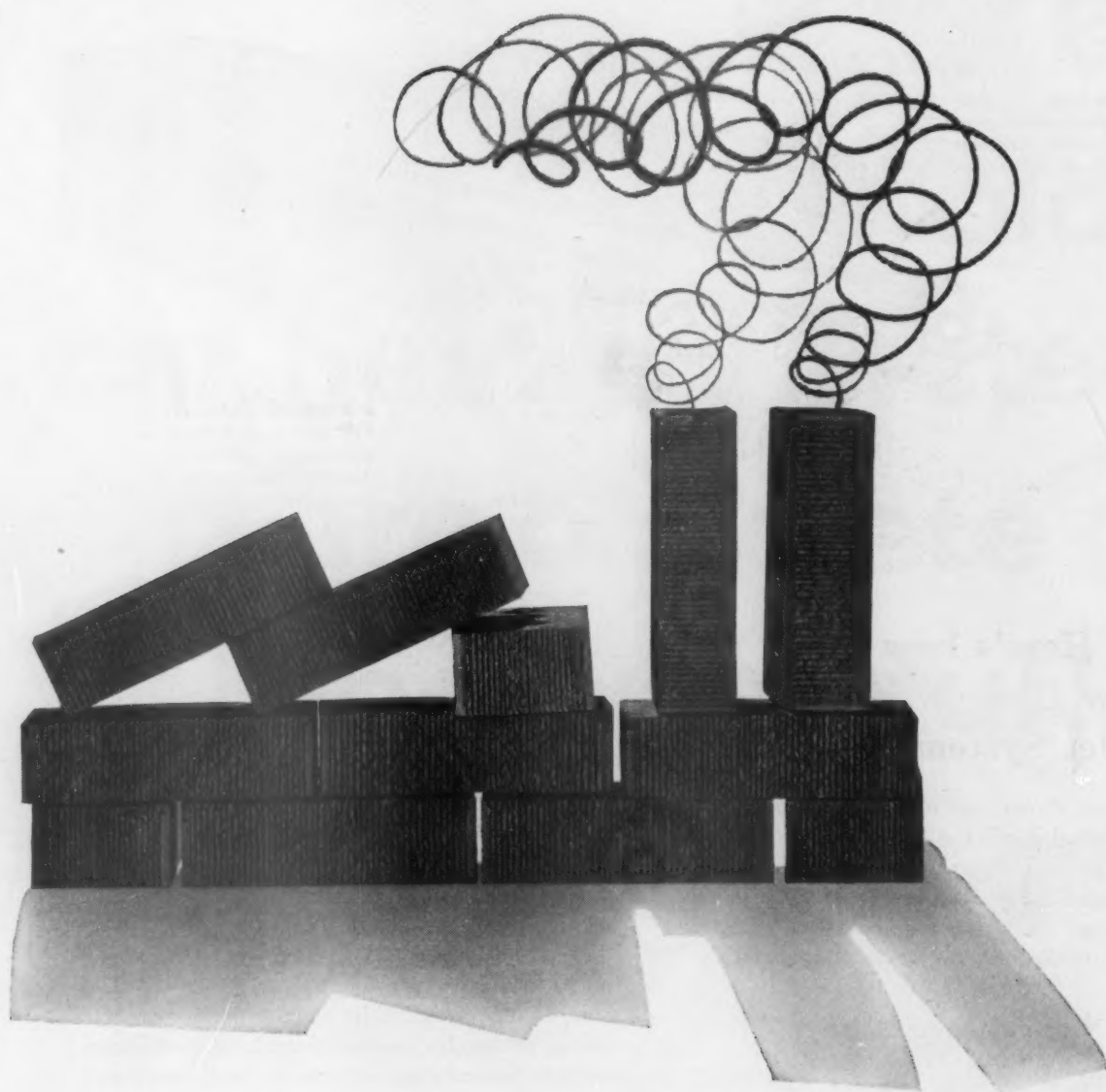
Competition created this superior Honeywell car heating system. It's another example of the benefits which the nation's railroads receive with Honeywell competing against other suppliers in the railroad car heating field. These benefits are expressed not only in better ways to do old jobs, but in lower prices achieved through competitive bidding.

Act now! See how easily this new Honeywell Steam System can be installed on existing cars during the normal shop period. A Honeywell railroad specialist will be glad to show you . . . he can also show you how to take full advantage of the dependable Honeywell Electronic Temperature Controls, which feature Push-Button Inspection, and even more maintenance savings. Contact your local Honeywell office today for details. Or . . . write Minneapolis-Honeywell Regulator Co., Dept. RA-11-226, Minneapolis 8, Minnesota.

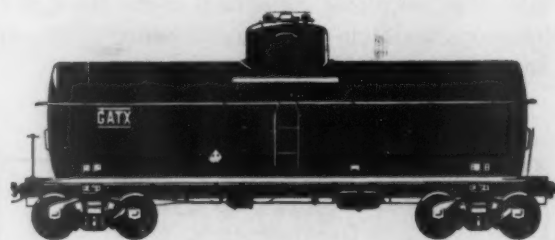
MINNEAPOLIS
Honeywell



Transportation Division



BEFORE YOU START *laying bricks for your new plant,*
see General American about GATX cars
to carry your bulk liquids



For dependability, the 46,000 tank cars
in the GATX fleet are designed, built and
operated by General American



GENERAL AMERICAN TRANSPORTATION CORPORATION

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What's the Law on Competitive Rates?

When, and if, the railroads should decide to make an effort to attract all the freight traffic for which they have an "inherent advantage," what would the law and the regulators have to say? The law instructing the Interstate Commerce Commission to give heed to "inherent advantage" appears to be explicit enough. But how about the case set forth in 288 I.C.C. 275, known as I. & S. Docket No. 6043, in which the I.C.C., Division 2, forbade the railroads in Official territory to reduce rates, for competitive reasons, on carloads of canned goods?

The proposed rates, on intra-subterritorial movements, would have yielded from 3.8 cents per ton-mile (for 100-mile hauls) down to 1.59 cents per ton-mile at 1,150 miles, based upon a minimum carload of 30 tons. There was no evidence that such rates would not have been profitable. The evidence indicated that existing rates of contract motor carriers were lower than the railroad rates but were about to be increased "to the present rail level." However, the railroads in the case testified that a differential of "as much as 20 per cent" was needed by them if traffic were to be re-diverted to the railroads. The railroads in Official territory, incidentally, hauled 4,000,000 tons less canned goods in 1951 than in 1946, although there had been "no decrease in the production of these commodities." The proposed railroad rates, based on a 30-ton minimum, would have yielded a higher rate per car-mile than existing rates, with loading at the existing 18-ton minimum.

In ordering the cancellation of the proposed rates, Division 2 said these rates would "have the effect of initiating widespread reductions in motor-carrier rates without materially benefiting the proponents"—another of the many cases in which regulators have presumed to know more about what is good for the railroads than railroad managements do.

Such, then, is one of the decisions, revealing one regulatory point of view in a case involving intercarrier competition. There are other I.C.C. decisions, however, evidencing quite a different attitude of mind, one such being that known as "Petroleum and Petroleum Products, California to Arizona," 241 I.C.C. 21. In that case the com-

mission refused to require railroad rates to be held at a higher level than the railroads desired—merely for the purpose of providing an umbrella to enable higher-cost truck operations to stay in business. In that case the commission said:

"If the costs of one transportation agency are so high as to prevent profitable operation at rates which permit the competing agency to perform satisfactory service to the public and to earn a good profit, it seems obvious that the high-cost agency in meeting the rates of the low-cost agency is attempting to compete on a nonprofit basis. To direct the low-cost agency in these circumstances to increase its rates would be to disregard the admonition of both the Interstate Commerce Act and the Motor Carrier Act to give due consideration 'to the need in the public interest of adequate and efficient . . . transportation service at the lowest possible cost consistent with the furnishing of such service.' It would be regulation in the interest of the high-cost agency rather than in the public interest."

So, what is the law, anyhow?

We ask the question, not in express or implied criticism of the commission or of anybody else, but because the question has not been clearly answered and the answer is of transcendent importance to the economic welfare of this country. There is such a thing, it should be noted, as a difference in the thoroughness with which cases are presented to tribunals. Without having read the complete record in the cases cited above, it would be unfair to form an opinion as to the comparative degree of conscientious analysis which the regulators brought to bear upon the evidence. Nevertheless, whatever the causes, the results certainly appear, *prima facie*, to be highly contradictory.

To the layman, there does not seem to be any language in the statutes which would require or even permit the regulators to force a low-cost carrier to hold up a rate umbrella in order to keep a high-cost rival in business. The problem confronting the railroads is the practical one of getting the right to bid for traffic for which they possess the "inherent advantage."

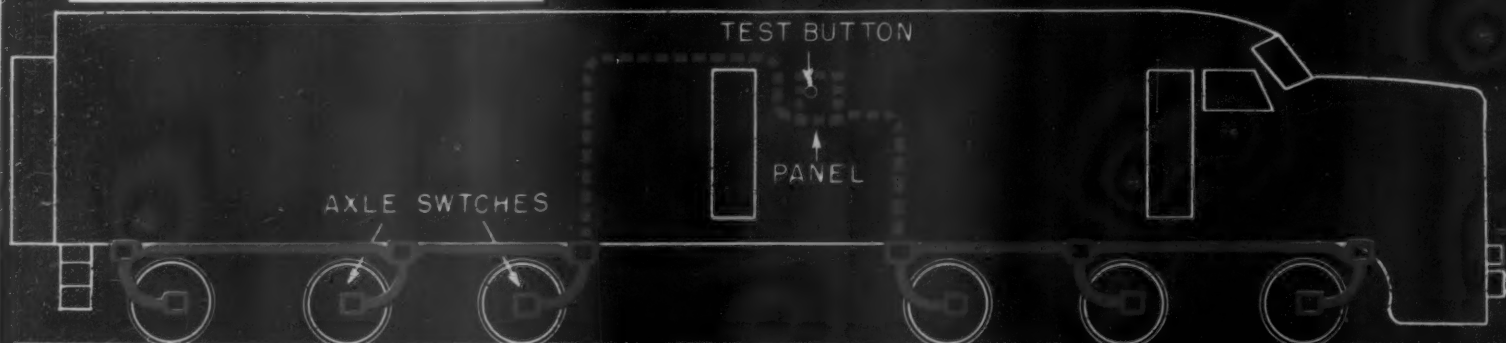
If the regulators are not willing to accept the assumption that the management of a business is interested in earning profits and knows what prices will be profitable to it, then the practical approach must be to present evidence to prove the point. If full presentation of all pertinent facts still does not bring regulatory decisions in conformance with economic reality, then the issue can be taken to the courts. If the courts are unable to see the light, then such cases can still be "tried in the newspapers"—until the law is modified or clarified.

Fully regulated carriers—if they are to survive and prosper—have no alternative, in their own and the public interest, except to insist to the full upon their right to compete.



At high speeds locomotive wheels literally "dance" on the rails, thereby become more susceptible to frequent slips. Such dangerous and costly slipping is now corrected automatically by G-E's new electric system.

Installation arrangement is simple. Three encased wires run from each axle switch unit to the control panel in the cab.





The axle switch is easily installed at one end of each axle and is accessible for servicing.

SLIP-SLIDE

New General Electric system provides protection against costly and dangerous wheel slip and slide

Wheel slip and wheel slide on diesel-electric or electric locomotives can be more than a nuisance—they can also be dangerous and contribute to high maintenance.

Now, General Electric has built and tested an electric device that detects, indicates and initiates corrective action against wheel slip. In addition, it detects and indicates wheel slide and locked axles which can occur during any phase of locomotive operation.

The slip protective system, which includes a switch unit mounted at one end of each axle, goes into action when any axle (or axles)—for any reason—starts rotating at a different speed than the others. At this point, an unbalance of voltages occurs in the axle switch circuits.


In the case of slip, the device initiates a reduction of power application to the traction motors. In order to prevent a second wheel slip, there is a time lag before power is re-applied to the slipping wheel.

In the case of slide, which occurs during dynamic or air braking, the condition is indicated to the operator, but braking is not interrupted automatically. A slide caused by a locked axle is also detected and indicated instantly.

The new General Electric system is extremely sensitive, indicating and correcting slippage over the entire range of locomotive speeds. Completely automatic, it requires none of the engineer's time or attention. The equipment can be installed in any type of journal box. All axle switches have the same cover and axle spline as commonly used on journal-mounted, axle-driven, speed recording equipment. Long life is assured by the simple construction, no brushes, no commutators, few moving parts to wear.

For complete information about the General Electric protective slip system, contact your nearest G-E Apparatus Sales office, or write for GEA-5991, "Wheel-Slip Wheel-Slide System for Locomotives." General Electric Co., Schenectady 5, N. Y.

123-3

You can put your confidence in—
GENERAL  ELECTRIC

Operations

(Continued from page 24)

previous set of proposed rules (*Railway Age*, May 5, page 15). These were discussed in conferences with interested parties.

The revised version now issued was accompanied by special rules of practice governing the submission of presentations by interested parties. Evidence-in-chief of all parties should be in the form of verified statements, filed on or before January 1, 1954. Notice of objections to receipt in evidence of any verified statement, or any part thereof, should be filed on or before January 15, 1954. Rebuttal evidence should be filed on or before February 1, 1954, even if objection has been filed to the original evidence. February 1 is also deadline date for the filing of requests for cross-examination, which must be in writing.



RADIO-TELEPHONE service is now available on the New York Central's "Twentieth Century Limiteds" throughout their daily runs in both directions between New York and Chicago. The service has been offered on the "Centuries" between New York and Buffalo since 1948. Calls can be made either from or to the train.

Figures of the Week

September Net Fell 19 Per Cent

Net income in first nine months continued above last year, despite September decline

Class I railroads in September had estimated net income, after interest and rentals, of \$80,000,000, according to the Bureau of Railway Economics of the Association of American Railroads.

This compared with net income of \$99,000,000 in the same month last year.

Net railway operating income, before interest and rentals, amounted to \$99,-

941,786 in September 1953. The comparable 1952 figure was \$121,311,182.

Estimated results for the first nine months of this year showed net income of \$651,000,000, compared with \$532,000,000 in the same period of 1952. Net railway operating income amounted to \$845,430,758, compared with \$735,326,363.

In the 12 months ended September 30, the rate of return averaged 4.51 per cent, compared with 4.17 per cent for the 12 months ended September 30, 1952.

Gross in the first nine months of 1953 amounted to \$8,082,250,257, compared with \$7,753,276,654 in the same period of 1952, an increase of 4.2 per cent.

Operating expenses amounted to \$6,087,046,185, compared with \$5,973,064,639, an increase of 1.9 per cent.

Fifteen Class I roads failed to earn interest and rentals in the first nine months of 1953, of which eight were in the Eastern district, two in the Southern region, and five in the Western district.

Freight Car Loadings

Loadings of revenue freight in the week ended October 31 totaled 780,863 cars, the Association of American Railroads announced on November 5. This was a decrease of 23,550 cars, or 2.9

per cent, compared with the previous week; a decrease of 81,253 cars, or 9.4 per cent, compared with the corresponding week last year; and a decrease of 56,754 cars, or 6.8 per cent, compared with equivalent 1951 week.

Loadings of revenue freight for the week ended October 24 totaled 804,413 cars; the summary for that week, compiled by the Car Service Division, A. A. R., follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, October 24			
District	1953	1952	1951
Eastern	134,178	128,240	142,692
Allegheny	156,571	145,104	174,597
Poconos	56,533	22,748	68,744
Southern	127,387	113,937	135,632
Northwestern ..	131,880	146,759	133,113
Central Western ..	132,853	137,992	142,761
Southwestern ..	65,011	65,993	67,261
Total Western Districts	329,744	350,744	343,135
Total All Roads	804,413	760,773	864,800
Commodities:			
Grain and grain products	58,042	58,114	52,834
Livestock	14,802	16,194	17,584
Coal	130,987	45,272	167,952
Coke	12,502	13,669	16,309
Forest products ..	45,199	46,514	46,501
Ore	76,505	87,228	73,997
Merchandise l.c.l.	72,026	74,958	75,437
Miscellaneous ..	394,350	418,824	414,186
October 24	804,413	760,773	864,800
October 17	822,539	838,408	886,648
October 10	804,070	842,797	868,683
October 3	812,554	851,920	858,757
September 26 ..	819,709	862,065	864,575

Cumulative total,
43 weeks

In Canada.—Carloadings for the seven-day period ended October 21 totaled 84,290 cars, compared with 74,709 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
October 21, 1953	84,290	31,338
October 21, 1952	88,254	34,901
Cumulative Totals:		
October 21, 1953	3,244,923	1,326,969
October 21, 1952	3,337,685	1,412,170

Competitive Transport

Rails Get Only Last-Chance Shot at Competitive Mail

Railroads will hereafter get from the Post Office Department only a last-chance, take-it-or-leave-it opportunity to hold truck-competitive mail traffic.

The department's latest instructions to district superintendents of its transportation service contemplate confronting the railroads with only preliminary or tentative truck-cost figures and asking them if they would be interested in negotiating truck-competitive rates on that basis. In cases where the railroads show no interest in such agreements (which would put the mail pay involved below the basis prescribed by the Interstate Commerce Commission), or where unacceptable offers are made,

CLASS I RAILROADS—UNITED STATES		
Month of September		
	1953	1952
Total operating revenues	\$904,263,439	\$942,156,597
Total operating expenses	673,209,889	674,593,772
Operating ratio—per cent	74.45	71.60
Taxes	111,323,268	129,533,241
Net railway operating income (Earnings before charges)	99,941,786	121,311,182
Net income, after charges (estimated) ..	80,000,000	99,000,000
Nine Months Ended September 30		
Total operating revenues	\$8,082,250,257	\$7,753,276,654
Total operating expenses	6,087,046,185	5,973,064,639
Operating ratio—per cent	75.31	77.04
Taxes	972,804,921	909,278,663
Net railway operating income (Earnings before charges)	845,430,758	735,326,363
Net income, after charges (estimated) ..	651,000,000	532,000,000

no further negotiations are to be conducted.

In other words, the instructions provide that unless an interested railroad makes a satisfactory offer prior to the making of a complete survey of a truck route and advertising the route, bids will be solicited and contracts awarded without giving the railroad another chance. Instructions previously in effect contemplated development of more complete data on comparative costs and more leisurely negotiations with the interested railroads.

Traffic

P-RSL Future Depends on Industrial Development

The future of the Pennsylvania-Reading Seashore Lines depends on further industrial development in Southern New Jersey, Joseph A. Fisher, president of that railroad and of the Reading, told the Atlantic City Rotary Club on November 3.

Mr. Fisher explained that P-RSL was originally formed by consolidation of two railroads because of financial losses growing out of increased highway competition. "But even with economies from consolidation, the problem of recurring operating losses has not been solved," he said. "Since consolidation in 1933 a deficit of \$50,000,000 has been accumulated and the annual deficit is now running at about \$5,000,000 annually."

"It is obvious that the deficit now being suffered cannot go on indefinitely," he continued, "and just as in the days when there was insufficient traffic to support two railroads, so may come the day when it is completely impossible to support one railroad."

Optimistic Proprietors — Mr. Fisher emphasized, however, that the owners of the P-RSL—the Reading and the Pennsylvania—look to the future with optimism, because of actual and potential growth of industry in southern New Jersey as part of the accelerated development of the Delaware valley. Terming this growth "one of the greatest industrial developments in the history of the country," Mr. Fisher said "it is to the future of the Delaware valley that we must look for traffic adequate to overcome the deficit situation on the P-RSL."

"Starved" for Traffic—That the Seashore Lines are "starving from a malnutrition diet of too little traffic," was emphasized also by J. M. Symes, vice-president of the Seashore Lines and executive vice-president of the PRR, in a recent speech at Woodbury, N.J. Addressing a dinner conference of the Southern New Jersey Development Council, Mr. Symes said that

"if industries could be developed along this property to the point of increasing traffic by 300 carloads of freight a day, it would just about absorb the deficit problem."

Mr. Symes pointed to efforts the railroad has been making to improve passenger and freight service; appointment of an industrial officer to work with local communities, business and civic leaders in attracting new industry; and to the placing of six outstanding citizens of New Jersey on the road's board of directors. He insisted, however, that underlying all this must be greater public understanding of the railroad problem, which, in turn, should lead to legislation correcting the evils of subsidy to competitive transport and the introduction of modern regulatory methods.

Northwest Favored; Growing, Says Macfarlane

Many factors are combining to create new wealth and population in northwestern states, reports Robert S. Macfarlane, president of the Northern Pacific.

A discovery of oil in the Williston basin and, to a lesser extent, the vast land reclamation program in Washington, Montana and North Dakota, are well known. They are contributing importantly to the economic development of the area. But Mr. Macfarlane cites other developments and potentialities—some not so widely publicized—that are also affecting this territory.

They include: Rapid growth of aluminum, electro-chemical and frozen food industries in Washington and Oregon; new impetus given the area's lumber industry by utilization of timber waste for production of plastics and other products, plus growing use of short lengths of inferior grades of lum-

ber to produce laminated beams of structural strength; development of taconite ore in Minnesota; the vast reserve of lignite coal (600 billion tons) in North Dakota; new copper mining methods which will prolong mining at Butte, Mont., by decades; growth of mining of chromite, fluor-spar and other minerals in Montana; and expansion of Montana's first elemental phosphorus plant.

The petroleum industry, he reports, is now spending an estimated \$100 million annually on exploration and development in the Williston basin, and a constant, steady development of the area's resources is foreseen. He reports that North Dakota's five fields now have 213 producing wells and that Montana's twelve fields have 76 producing wells with their combined daily output coming to about 22,000 barrels. The Northern Pacific either owns or has mineral reservations on about 3 million acres in the basin.

Rates & Fares

Section 22 Files Now At Army Zone Offices

Public files showing rates tendered the government under Section 22 of the Interstate Commerce Act are now maintained at each of the Army's four zone transportation offices. These offices are at Pittsburgh, Pa., Memphis, Tenn., St. Louis, Mo., and Salt Lake City, Utah.

Previously, the file had been maintained only at the Office of the Chief of Transportation in Washington, D.C. (*Railway Age*, August 31, page 10.) All inquiries relative to the files should



OPENED WITH A SHOW.—When the St. Louis-San Francisco recently opened a small new yard at Wichita, Kan., there was an "open house" party staged with special exhibits for some 2,000 employees and invited guests. Souvenir Frisco engineer caps

are much in evidence as visitors leave the refreshment tent (right) to inspect the exhibit of track equipment and rolling stock (left). Local switch engine, to be housed in small shop in background, will be equipped with two-way radio.

now be addressed to the zone transportation officers. Maintenance of the files in the zone offices "will depend upon the utilization," an Army announcement said.

Illinois Roads Join Drought-Relief Program

Railroads serving Illinois Freight Association territory have made a 50 per cent reduction in their freight rates for moving hay into drought disaster areas. The action was taken by making Western Trunk Lines Freight Tariff 428-A applicable in I.F.A. territory, effective as of October 30.

This tariff was put into effect by Western Trunk Line roads October 16, and a similar reduction was made October 23 by railroads serving Southern Freight Association territory. The reduced rates will be in effect until November 16, 1953.

North Shore Line Seeks Passenger Fare Increase

The Chicago North Shore & Milwaukee last week asked the I.C.C. to approve a passenger fare increase which is expected to produce \$100,000 annually in added revenue.

The road said it now has a basic fare of three cents per mile between Chicago and Racine, Wis., approximately 62 miles, but at greater distances the fare grades downward and reaches 2.5 cents at 74 miles. Meanwhile, the fare between Milwaukee and Chicago, 85 miles, is a flat \$2.12.

Under the North Shore's new proposal, the \$2.12 fare would not be changed, for competitive reasons, but the basic three-cent fare would be extended to cover that area between Racine and Milwaukee.

The North Shore asked authority to place the new fares into effect December 3, on five days' notice. Round trip fares would continue at 180 per cent of one way.

South's Steel-Rate Cut In; East's Left Pending

Reduced freight rates on iron and steel products moving within Southern territory became effective November 5, the Interstate Commerce Commission's Division 2 having voted on the previous day not to suspend the tariffs involved. At the same time the division refused to give eastern railroads short-notice-tariff authority to establish on the same day like reductions in rates on iron and steel articles moving from points in Eastern territory to points in Southern territory.

Thus the tariffs of the eastern roads remain on file with an effective date of November 21, which meets the normal 30-days-notice requirement. They are,

of course, still subject to protest and suspension.

Continuing losses of traffic to competing trucks prompted the southern roads to make the cuts. The eastern lines then filed their tariffs in order to maintain rate relationships (*Railway Age*, November 2, page 68).

Generally, the new Southern-territory rates provide two mileage scales, one subject to a carload minimum weight of 40,000 lb. and the other subject to an 80,000-lb. minimum. They superseded higher scales subject to minima of 40,000 lb. and 60,000 lb. The division let them go in despite protests from motor carrier associations.

Organizations

R.B.A. Dinner November 20

The 45th annual meeting and dinner of the Railway Business Association will be held in Chicago November 20. The association's membership luncheon will be held in the Upper Tower Ballroom of the Conrad Hilton Hotel and the business meeting will follow in the same quarters.

The dinner, which will be held in the hotel's Grand Ballroom, will be attended by William T. Faricy, president of the Association of American Railroads, A.A.R. vice-presidents, and presidents of Class I railroads—all of whom will be guests of the association. Norman C. Naylor, president of the Union Asbestos & Rubber Co., and chairman of the R.B.A. executive committee, will preside.

Jersey Central Lines Honor Retired Employees

The Jersey Central Lines' Veteran Employees Association, said to be the oldest such group in the country, sponsored the road's semiannual testimonial dinner for recently retired employees at the Elks Club, Elizabeth, N.J., on October 23. The veterans' organization, founded at Newark, N.J., in 1903, observed its 50th anniversary at the dinner, which was attended by about 900 employees and their families, including 105 men and women who retired since May 1.

Principal speaker at the dinner, the twelfth to be held since 1948 when the Jersey Central instituted its employee recognition plan, was Rev. W. Brown, chairman of the executive committee of the road's board of directors, and former president of the Reading. At one time Mr. Brown was vice-president of the Jersey Central.

The Second Annual Southeastern Transportation Clinic will be presented by the Division of Transportation of the Atlanta division, Uni-

versity of Georgia, on November 19-20. Theme of the clinic will be "Government and Transportation." Dr. G. Lloyd Wilson, chairman, department of transportation and public utilities, Wharton School of Finance of the University of Pennsylvania, will deliver the keynote address.

Equipment & Supplies

PASSENGER CARS

LI Car Improvement Plans Contingent on Fare Increase

Tentative plans for purchase of new passenger cars and modernization of existing cars for use in the Long Island's electrified commuter territory (*Railway Age*, February 16, page 18), are contingent upon a fare increase, for which application will probably be filed with the New York Public Service Commission "in about a month."

The increase, LI Trustee William Wyer told a New York press conference November 5, would average about 10 per cent in commuter fares and 5 per cent in other fares, and would be calculated to yield about \$2.7 million per year in increased revenues. It is necessitated, Mr. Wyer emphasized, by higher operating costs resulting principally from upward cost-of-living adjustments in wages; an increase of approximately \$1 million in annual electric power costs which will result from higher electric rates scheduled to become effective next January 1, and the cost of maintaining the road's newly-completed speed control system. The proposed fare increase is not related to pending union demands for higher wages and expanded "fringe" benefits; if granted, they, Mr. Wyer said, may require a further fare increase at some later date.

Would Spend \$25 Million—The rolling stock modernization program which the proposed fare increase is intended to finance, in part, would include purchase of 112 new cars, full rehabilitation of 558 existing cars, and retirement of 431 of the railroad's oldest cars. The new cars, estimated to cost about \$125,000 each, would be similar to 20 now being received from the Pullman-Standard Car Manufacturing Company (*Railway Age*, October 19, page 17). The rehabilitated cars would be completely rebuilt, with roller-bearing trucks, rubber-cushioned coupler mountings, forced-draft ventilation, complete insulation, brighter lighting, new foam-rubber seats and centralized door controls. The new and rebuilt cars, together with some 60 relatively new double-deck cars and the 20 new single-deck cars now going into service, would give the LI a total commuter fleet of approximately 750

cars. Because each of the new or rebuilt cars would seat 128 or 132 passengers, however, total seating capacity would be greater than is provided by the road's present fleet of more than 1,000 cars, most of which seat from 69 to 90 passengers each.

Total cost of the program, originally set at \$28.8 million, is now estimated at \$24,828,562, of which approximately \$13 million would be provided by earnings, \$8 million by borrowing against the 112 new cars, and \$4 million from economies in equipment maintenance anticipated as the new and rebuilt cars go into service. These operating savings, it is estimated, will eventually repay the cost of the entire program.

Expenditures under the program would begin as soon as possible after the proposed fare increase, if granted, becomes effective, and would be spread, in approximately equal amounts, over the six succeeding years. Initial funds would be provided by some \$3 million which the road still has on hand from sale of its Rockaway branch to the city of New York for conversion to a transit facility.

Supply Trade

J. E. Hacker, works manager of the **Electro-Motive Division** of **General Motors Corporation** at LaGrange, Ill., has been appointed manager at Cleveland, succeeding **R. L. Terrell**, who replaces Mr. Hacker at LaGrange.

The **Clark Equipment Company** has reorganized its dealer organization in the south to handle its newly acquired Ross straddle carrier and fork truck lines. As with the firm's recently revamped dealer organization in the midwest, Clark dealers in the south



ADMIRAL CURTIS S. SMILEY, who has been appointed to the executive staff of the **Sterling Engine Company** to assist to president. Admiral Smiley recently retired from the Navy.



ROY D. KING, manager of the railroad division of **Magnus Chemical Company**, who has been elected vice-president in charge of railroad sales and development.

will add products of the **Ross Carrier Company**, acquired earlier this year, to their regular sales and service activities.

A new branch of the **Graybar Electric Company** has been opened at 1601 South Treadaway, Abilene, Texas. **E. L. Preston** has been appointed manager, and **H. L. Coldwell**, operating manager.

William A. Ross has been appointed sales manager of the **Circo Equipment Company**.

The **Morrison Railway Supply Corporation** has acquired the **International Equipment Company**, which will be known as the **International Equipment Division** of **Morrison Railway Supply Corporation**. **Marcy L. Morrison**, a former ordnance procurement engineer with the Department of the Navy, has been named general manager of the division.

Templeton, Kenly & Co. has moved into its new plant in Broadview, Ill., a suburb of Chicago.

The **Rail Flange Lubricator Company**, Portland, Ore., has announced appointment of **Chester A. Olsen**, Room 1712, 316 South LaSalle street, Chicago, as midwestern sales representative.

O. T. Henkle, Jr., vice-president, sales, of **Mercury Manufacturing Company**, has been appointed executive vice-president, and has been succeeded by **P. K. McCullough**, formerly vice-president, manufacturing.

William E. Reagan has been named transportation sales engineer of the **Minneapolis-Honeywell Regulator Company's** transportation division at Philadelphia, and **Forrest Erickson** has been assigned to engineering duties on transportation con-

trol systems. Both formerly were with other Honeywell divisions in Philadelphia.

C. M. Laffoon, manager of the generator engineering department of **Westinghouse Electric Corporation**, has been appointed assistant manager of the transportation and generator division. In his new position he will give guidance and assistance on engineering problems and product development.

New Facilities

Canadian National.—Construction of a large hotel in Montreal, to cost about \$20,000,000 (*Railway Age*, August 24, page 16), will be followed immediately by construction of a \$14,000,000 office building in the same area. **Donald Gordon**, CNR chairman and president, has announced. Work on the hotel is scheduled to begin next year.

Chicago South Shore & South Bend.—Division 4 of the I.C.C. has authorized this road to relocate approximately 4.2 miles of double track main line in the Hammond-Gary, Ind., area. The relocation will eliminate delays resulting from traffic congestion, and will result in "substantial savings" in operating expenses. Cost of the relocation project is estimated at \$1,544,000. (See pages 12 and 13.)

Erie.—Has ordered equipment from the **General Railway Signal Company** for installation of a traffic control system between Suffern, N.Y., and Port Jervis, 56 miles.

Securities

Minneapolis & St. Louis.—*Stock Dividend.*—M&StL directors, at a special meeting in New York on October 28, declared a stock dividend of one-third share for each share of authorized common stock. Payment of the stock dividend is subject to approval by the I.C.C. and by M&StL stockholders through amendment of the articles of incorporation. The record date for determination of stockholders entitled to the dividend will be set later by the board.

Dividends Declared

BANGOR & AROOSTOOK.—5% preferred, \$1.25, quarterly, payable January 2 to holders of record December 7.

CLEVELAND & PITTSBURGH.—4% guaranteed, 50¢, quarterly; 7% guaranteed, 87½¢, quarterly, both payable December 1 to holders of record November 10.

MAINE CENTRAL.—5% preferred, \$2.50, ac-

cumulative, payable December 1 to holders of record November 16.

MINNEAPOLIS & ST. LOUIS.—33 1/3 per cent stock dividend, subject to approval of stockholders and I.C.C.

NASHVILLE, CHATTANOOGA & ST. LOUIS.—\$1, quarterly, payable December 1 to holders of record November 10.

NORFOLK & WESTERN.—75¢, quarterly, 50¢, extra, both payable December 10 to holders of record November 10.

READING.—4% 1st preferred, 50¢, quarterly, payable December 10 to holders of record November 19.

RICHMOND, FREDERICKSBURG & POTOMAC.—6% guaranteed, 75¢, semiannual; 7% guaranteed, 87 1/2¢, semiannual, both payable November 2 to holders of record October 31.

SOUTHERN.—common, 62 1/2¢, quarterly; 5% preferred, 62 1/2¢, quarterly; both payable December 15 to holders of record November 16.

Security Price Averages

	Nov. 2	Prev. Week	Last Year
Average price of 20 representative railway stocks	59.72	58.89	62.49
Average price of 20 representative railway bonds	91.21	90.50	92.55

Railway Officers

ATLANTIC COAST LINE.—**L. A. Anderson** has been appointed superintendent of the Jacksonville district at Sanford, Fla., and **J. U. Rooker** has been named trainmaster of the Tampa district at Lakeland, Fla. Mr. Anderson has been acting district superintendent at Sanford and Mr. Rooker has been acting trainmaster at Lakeland.

H. H. Hill, superintendent transportation, has been appointed general superintendent, Northern division, with headquarters as before at Savannah, Ga. **J. W. Plant**, assistant to general manager at Wilmington, N.C., has been appointed acting superintendent transportation, Northern division, at Savannah.

C. W. Balch has been named general agent at San Francisco.

CANADIAN NATIONAL.—**Arthur P. Lait**, passenger traffic manager,



Arthur P. Lait

has been named assistant general passenger traffic manager at Montreal. **J. N. Vincent**, assistant passenger

traffic manager, has been appointed manager of the passenger service bureau, and **W. E. McCall**, assistant manager of passenger service bureau, has been appointed assistant passenger traffic manager, both at Montreal.

P. Keir, general foreman, Point St. Charles car shop, Montreal, has been appointed superintendent, car shop, Leaside, Ont., succeeding **J. B. Dunlop**, retired.

CANADIAN PACIFIC.—**George W. Hardy**, auditor of joint facilities at Montreal, has been appointed to the newly created post of deputy general auditor at Calgary, Alta. **Paul A. Nepveu**, statistician at Montreal, has been appointed general statistician, succeeding **Robert K. O'Hara**, who replaces Mr. Hardy as auditor of joint facilities.

CHESAPEAKE & OHIO.—**John O. Dellinger, Jr.**, assistant coal traffic agent at Beckley, W. Va., has been appointed coal traffic agent at Chicago, succeeding **V. M. Darnall**, deceased. **David C. McCraw**, chief clerk in the coal traffic department at Chicago, succeeds Mr. Dellinger at Beckley.

ERIE.—**Edwin J. Robisch**, assistant superintendent of the Marion division at Chicago, has been promoted to superintendent of the Allegany-Brad-



Edwin J. Robisch

ford-Meadville and Buffalo and Southwestern divisions at Salamanca, N. Y., effective December 1, succeeding **Thomas E. McGinnis**, whose transfer to Youngstown, Ohio, was noted in *Railway Age* October 19.

Wilbur J. Betz has been appointed trainmaster, New York division, at Jersey City, N.J., succeeding **Walton E. Smith**, whose appointment as division engineer of the Buffalo and Rochester divisions at Buffalo was noted in *Railway Age* October 26.

PITTSBURGH & WEST VIRGINIA.—This road's executive vice-president, **Richard N. Shields**, has been elected president, and **Charles J. Graham**, who has been its president since 1938, has been named chairman of the board.

READING.—**W. Dwight D. Prince**, general passenger agent, has been appointed passenger traffic manager at Philadelphia, succeeding **E. D. Osterhout**, who retired October 31, after 50 years of railroad service. **Sidney R. Spencer**, assistant general passenger agent, has been named gen-



W. Dwight D. Prince

eral passenger agent and he will be succeeded by **Clarence R. Tippet**.

Mr. Prince was born in Chicago September 20, 1897, and entered service with the Reading in 1915 as clerk in the passenger department rate section. He became general passenger agent last June.

SANTA FE.—**W. G. Hunt**, assistant general auditor, has been appointed general auditor at Chicago, succeeding **W. E. Davis**, whose retirement was noted in *Railway Age* November 2.

SEABOARD.—**L. A. Porter**, of e assistant to chief mechanical officer, has retired at his own request, after 34 years of service.

SOUTHERN.—**R. M. Merchant**, assistant tie and timber agent, has been promoted to tie and timber agent, with headquarters remaining at Washington, D.C., succeeding the late **W. F. Dunn**.

SOUTHERN PACIFIC.—**J. Robert Lehmann** has been named advertising agent at Los Angeles, succeeding **Charles R. Littler**, who has retired after 42 years of service with the SP.

Harold R. Demmon, assistant general bridge inspector, has been appointed general bridge inspector, with headquarters as before at San Francisco, succeeding **Dewitt T. Rintoul**, who has retired after more than 51 years of continuous service with the SP.

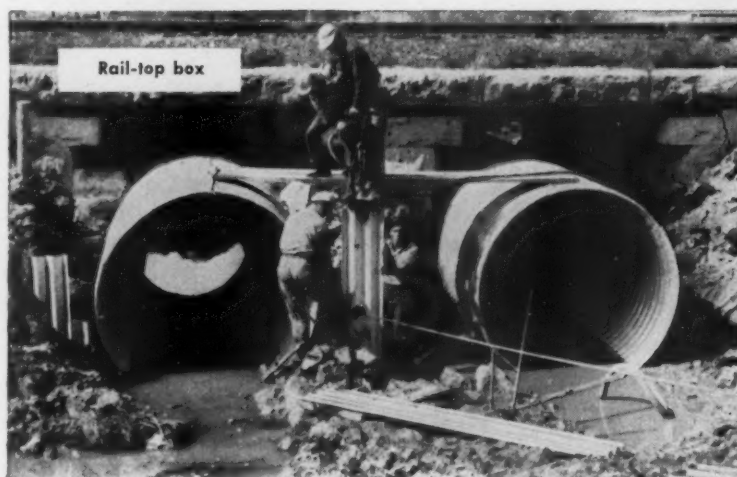
OBITUARY

William H. Millard, retired freight traffic manager of the **Northern Pacific** at St. Paul, died October 24 at his home in Pasadena, Cal.

Multi-Plate replaces 5 types of railroad bridges



Timber trestle



Rail-top box



Steel beam



Concrete box

Thinking of replacing small railroad bridges? Whatever the type or size, you can probably do it faster and easier with an Armco MULTI-PLATE Structure.

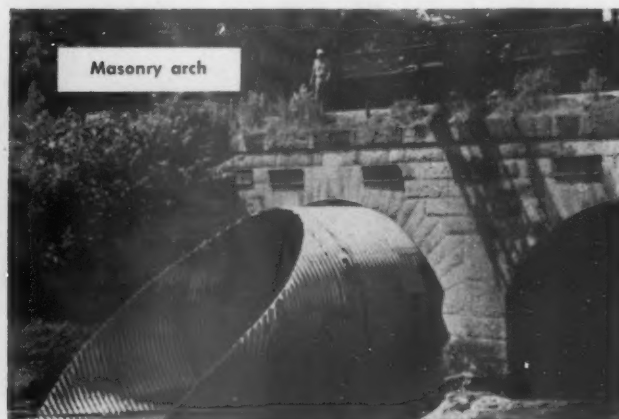
Want proof? Shown here are five major types of small railway bridges — all replaced by Armco MULTI-PLATE Pipe. And usually the replacement is completely installed without a single minute's delay. Traffic stays on schedule.

All MULTI-PLATE Drainage Structures — Pipe, Arch and Pipe-Arch — come in curved, corrugated metal sections. Assembly is a simple matter of bolting these pre-engineered sections together with standard structural wrenches. And the whole job can be handled by regular labor crews.

Because MULTI-PLATE is quickly and economically installed by inexpensive labor; does not delay traffic and requires practically no maintenance — it is your most economical solution to small bridge replacement problems.

These drainage structures are available in a wide selection of sizes and gages. For more details, write us. Armco Drainage & Metal Products, Inc., 3183 Curtis Street, Middletown, Ohio. Subsidiary of Armco Steel Corporation. In Canada: write Guelph, Ontario. Export: The Armco International Corporation.

Armco MULTI-PLATE Structures



Masonry arch

This month Dr. Oscar Horger demonstrates that positive roller alignment is one reason why:

The taper makes TIMKEN® the only journal bearing that delivers what you expect when you buy a roller bearing

THERE are just two reasons for a railroad to buy roller bearings: to end the hot box problem and to cut operating and maintenance costs to a minimum. And there's just *one* bearing you can count on to deliver. It's the Timken tapered roller bearing, and here's why:

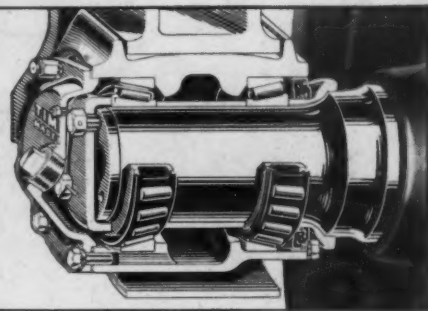
1) *No lateral movement within the bearing.* Roller bearings are designed to *roll* the load, not *slide* it. Lateral movement, such as occurs in straight roller bearings, scuffs rollers and races. As they move laterally, the pumping action forces lubricant out of the seal, sucks dirt and water in. And auxiliary thrust devices—not completely effective, hard to lubricate with grease and requiring extra maintenance—are necessary.

In Timken bearings, the taper prevents free lateral movement—and the problems it creates. Timken bearings don't pump, don't scuff, don't score. Not only does the hot box problem end—you save on lubricant and maintenance, get longer bearing life.

2) *Positive roller alignment.* The taper keeps the roller ends snug against the rib. This wide-area contact keeps the rollers aligned. Timken bearing rollers can't skew to upset the full line contact and shorten bearing life.

When you switch to roller bearings to end hot boxes and cut costs, remember: Timken is the only journal bearing you can fully count on to end the hot box problem and cut operating and maintenance costs to a minimum—it's the taper! The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TAPER HOLDS
ROLLERS AGAINST
CONE RIB AT
ALL TIMES.
NO SLIDING.



THE TAPER MAKES **TIMKEN** THE BEARING YOU TRUST

TRADE-MARK REG. U. S. PAT. OFF.

NOT JUST A BALL  NOT JUST A ROLLER  THE TIMKEN TAPERED ROLLER  BEARING TAKES RADIAL  AND THRUST  LOADS OR ANY COMBINATION 